



#8

SEQUENCE LISTING

<110> Makowski, Lee
Hyman, Paul
Williams, Mark

<120> STAGED ASSEMBLY OF NANOSTRUCTURES

<130> 8471-010-999

<140> 10/080,608

<141> 2002-02-21

<160> 180

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 28

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 1

Met	Lys	Gln	Leu	Glu	Asp	Lys	Val	Glu	Glu	Leu	Leu	Ser	Lys	Asn	Tyr
1				5				10						15	
His	Leu	Glu	Asn	Glu	Val	Ala	Arg	Leu	Lys	Lys	Leu				
		20					25								

<210> 2

<211> 28

<212> PRT

<213> Unknown

<220>

<223> Probable variant of homo sapiens protein.

<400> 2

Thr	Asp	Thr	Leu	Gln	Ala	Glu	Thr	Asp	Gln	Leu	Glu	Asp	Glu	Lys	Tyr
1				5				10						15	
Ala	Leu	Gln	Thr	Glu	Ile	Ala	Asn	Leu	Leu	Lys	Glu				
		20					25								

<210> 3

<211> 28

<212> PRT

<213> Unknown

<220>

<223> Probable variant of homo sapiens protein.

<400> 3

Ala	Ala	Arg	Leu	Glu	Glu	Lys	Val	Lys	Thr	Leu	Lys	Ala	Gln	Asn	Tyr
1				5				10						15	
Glu	Leu	Ala	Ser	Thr	Ala	Asn	Met	Leu	Arg	Glu	Gln				
		20					25								

<210> 4

<211> 35

<212> PRT

<213> *Mus musculus*

<400> 4

Val	Leu	Glu	Thr	Gln	His	Lys	Asn	Glu	Arg	Leu	Thr	Ala	Glu	Val	Glu
1				5					10					15	
Gln	Leu	Gln	Lys	Lys	Leu	Ser	Thr	Leu	Ser	Arg	Glu	Phe	Lys	Gln	Leu
			20					25					30		
Arg	Asn	Leu													
		35													

<210> 5
 <211> 35
 <212> PRT
 <213> Homo sapiens

Cys	Lys	Glu	Leu	Thr	Gly	Glu	Asn	Glu	Ala	Leu	Glu	Lys	Lys	Ala	Asp
1				5					10					15	
Ser	Leu	Lys	Glu	Arg	Ile	Gln	Tyr	Leu	Ala	Lys	Glu	Ile	Glu	Glu	Val
			20					25					30		
Lys	Asp	Leu													
		35													

<210> 6
 <211> 33
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 33
 <223> Xaa = Any Amino Acid

Cys	Gly	Gly	Val	Gln	Ala	Glu	Glu	Gln	Lys	Leu	Ile	Ser	Glu	Glu	Asp
1				5					10					15	
Leu	Leu	Arg	Lys	Arg	Arg	Glu	Gln	Leu	Lys	His	Lys	Leu	Glu	Gln	Leu
			20					25					30		
Xaa															

<210> 7
 <211> 33
 <212> PRT
 <213> Mus musculus

<220>
 <221> VARIANT
 <222> 33
 <223> Xaa = Any Amino Acid

Cys	Gly	Gly	Met	Arg	Arg	Lys	Asn	Asp	Thr	His	Gln	Gln	Asp	Ile	Asp
1				5					10					15	
Asp	Leu	Lys	Arg	Gln	Asn	Ala	Leu	Leu	Glu	Gln	Gln	Val	Arg	Ala	Leu
			20					25					30		
Xaa															

<210> 8
 <211> 32
 <212> PRT
 <213> Unknown

<220>

<223> Probable variant of Mus musculus protein

<400> 8

Val	Lys	Ser	Leu	Glu	Asn	Arg	Val	Ala	Val	Leu	Glu	Asn	Gln	Asn	Lys
1				5					10					15	
Thr	Leu	Ile	Glu	Glu	Leu	Lys	Ala	Leu	Lys	Asp	Leu	Tyr	Ser	His	Lys
			20					25					30		

<210> 9

<211> 33

<212> PRT

<213> Schizosaccharomyces pombe

<400> 9

Val	Val	Thr	Leu	Lys	Glu	Leu	His	Ser	Ser	Thr	Thr	Leu	Glu	Asn	Asp
1				5					10					15	
Gln	Leu	Arg	Gln	Lys	Val	Arg	Gln	Leu	Glu	Glu	Glu	Leu	Arg	Ile	Leu
			20					25					30		

Lys

<210> 10

<211> 885

<212> PRT

<213> Mus musculus

<400> 10

Met	Glu	Ile	Gly	Val	Ser	Val	Ala	Glu	Cys	Lys	Ser	Val	Pro	Gly	Val
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Thr	Ser	Thr	Pro	His	Ser	Lys	Asp	His	Ser	Ser	Pro	Phe	Tyr	Ser	Pro
			20					25					30		
Ser	His	Asn	Gly	Leu	Leu	Ala	Asp	His	His	Glu	Ser	Leu	Asp	Asn	Asp
		35					40					45			
Val	Ala	Arg	Glu	Ile	Gln	Tyr	Leu	Asp	Glu	Val	Leu	Glu	Ala	Asn	Cys
	50					55					60				
Cys	Asp	Ser	Ser	Val	Asp	Gly	Thr	Tyr	Asn	Gly	Ile	Ser	Ser	Pro	Glu
65					70					75					80
Pro	Gly	Ala	Ala	Ile	Leu	Val	Ser	Ser	Leu	Gly	Ser	Pro	Ala	His	Ser
				85					90					95	
Val	Thr	Glu	Ala	Glu	Pro	Thr	Glu	Lys	Ala	Ser	Gly	Arg	Gln	Val	Pro
			100					105					110		
Pro	His	Ile	Glu	Leu	Ser	Arg	Ile	Pro	Ser	Asp	Arg	Met	Ala	Glu	Gly
		115					120					125			
Glu	Arg	Ala	Asn	Gly	His	Ser	Thr	Asp	Gln	Pro	Gln	Asp	Leu	Leu	Gly
	130					135					140				
Asn	Ser	Leu	Gln	Ala	Pro	Ala	Ser	Pro	Ser	Ser	Ser	Thr	Ser	Ser	His
145					150					155					160
Cys	Ser	Ser	Arg	Asp	Gly	Glu	Phe	Thr	Leu	Thr	Thr	Leu	Lys	Lys	Glu
			165						170					175	
Ala	Lys	Phe	Glu	Leu	Arg	Ala	Phe	His	Glu	Asp	Lys	Lys	Pro	Ser	Lys
			180					185					190		
Leu	Phe	Glu	Glu	Asp	Glu	Arg	Glu	Lys	Glu	Gln	Phe	Cys	Val	Arg	Lys
		195					200					205			
Val	Arg	Pro	Ser	Glu	Glu	Met	Ile	Glu	Leu	Glu	Lys	Glu	Arg	Arg	Glu
	210					215					220				
Leu	Ile	Arg	Ser	Gln	Ala	Val	Lys	Lys	Asn	Pro	Gly	Ile	Ala	Ala	Lys
225					230					235					240
Trp	Trp	Asn	Pro	Pro	Gln	Glu	Lys	Thr	Ile	Glu	Glu	Gln	Leu	Asp	Glu
			245						250					255	
Glu	His	Leu	Glu	Ser	His	Arg	Arg	Tyr	Lys	Glu	Arg	Lys	Glu	Lys	Arg
			260					265					270		
Ala	Gln	Gln	Glu	Gln	Leu	Gln	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Leu

770		775		780
Lys Thr Ala Pro Gly	Lys Ile Glu Lys Val	Lys Pro Pro Pro Ser Pro		
785	790	795	800	
Thr Thr Glu Gly Pro	Ser Leu Gln Pro Asp	Leu Ala Pro Glu Glu Ala		
	805	810	815	
Ala Gly Thr Gln Arg	Pro Lys Asn Leu Met	Gln Thr Leu Met Glu Asp		
	820	825	830	
Tyr Glu Thr His Lys	Ser Lys Arg Arg Glu Arg	Met Asp Asp Ser Ser		
	835	840	845	
Tyr Thr Ser Lys Leu	Leu Ser Cys Lys Val	Thr Ser Glu Val Leu Glu		
	850	855	860	
Ala Thr Arg Val Asn	Arg Arg Lys Ser Ala	Ser Gly Leu Ala Leu Gly		
865	870	875	880	
Gly Arg Asp Leu Arg				
	885			

<210> 11
 <211> 3878
 <212> PRT
 <213> Homo sapiens

<400> 11

Met Glu Asp Glu Glu Arg Gln Lys Lys Leu Glu Ala Gly Lys Ala Lys
1 5 10 15
Ile Glu Glu Leu Ser Leu Ala Phe Leu Val Arg Gln Leu Ala Gln Phe
20 25 30
Arg Gln Arg Lys Ala Gln Ser Asp Gly Gln Ser Pro Ser Lys Lys Gln
35 40 45
Lys Lys Lys Arg Lys Thr Ser Ser Ser Lys His Asp Val Ser Ala His
50 55 60
His Asp Leu Asn Ile Asp Gln Ser Gln Cys Asn Glu Met Tyr Ile Asn
65 70 75 80
Ser Ser Gln Arg Val Glu Ser Thr Val Ile Pro Glu Ser Thr Ile Met
85 90 95
Arg Thr Leu His Ser Gly Glu Ile Thr Ser His Glu Gln Gly Phe Ser
100 105 110
Val Glu Leu Glu Ser Glu Ile Ser Thr Thr Ala Asp Asp Cys Ser Ser
115 120 125
Glu Val Asn Gly Cys Ser Phe Val Met Arg Thr Gly Lys Pro Thr Asn
130 135 140
Leu Leu Arg Glu Glu Glu Phe Gly Val Asp Asp Ser Tyr Ser Glu Gln
145 150 155 160
Gly Ala Gln Asp Ser Pro Thr His Leu Glu Met Met Glu Ser Glu Leu
165 170 175
Ala Gly Lys Gln His Glu Ile Glu Glu Leu Asn Arg Glu Leu Glu Glu
180 185 190
Met Arg Val Thr Tyr Gly Thr Glu Gly Leu Gln Gln Leu Gln Glu Phe
195 200 205
Glu Ala Ala Ile Lys Gln Arg Asp Gly Ile Ile Thr Gln Leu Thr Ala
210 215 220
Asn Leu Gln Gln Ala Arg Arg Glu Lys Asp Glu Thr Met Arg Glu Phe
225 230 235 240
Leu Glu Leu Thr Glu Gln Ser Gln Lys Leu Gln Ile Gln Phe Gln Gln
245 250 255
Leu Gln Ala Ser Glu Thr Leu Arg Asn Ser Thr His Ser Ser Thr Ala
260 265 270
Ala Asp Leu Leu Gln Ala Lys Gln Gln Ile Leu Thr His Gln Gln Gln
275 280 285
Leu Glu Glu Gln Asp His Leu Leu Glu Asp Tyr Gln Lys Lys Lys Glu
290 295 300
Asp Phe Thr Met Gln Ile Ser Phe Leu Gln Glu Lys Ile Lys Val Tyr
305 310 315 320

Glu	Met	Glu	Gln	Asp	Lys	Lys	Val	Glu	Asn	Ser	Asn	Lys	Glu	Glu	Ile
				325					330					335	
Gln	Glu	Lys	Glu	Thr	Ile	Ile	Glu	Glu	Leu	Asn	Thr	Lys	Ile	Ile	Glu
			340					345					350		
Glu	Glu	Lys	Lys	Thr	Leu	Glu	Leu	Lys	Asp	Lys	Leu	Thr	Thr	Ala	Asp
		355					360					365			
Lys	Leu	Leu	Gly	Glu	Leu	Gln	Glu	Gln	Ile	Val	Gln	Lys	Asn	Gln	Glu
	370					375					380				
Ile	Lys	Asn	Met	Lys	Leu	Glu	Leu	Thr	Asn	Ser	Lys	Gln	Lys	Glu	Arg
385					390					395					400
Gln	Ser	Ser	Glu	Glu	Ile	Lys	Gln	Leu	Met	Gly	Thr	Val	Glu	Glu	Leu
			405						410					415	
Gln	Lys	Arg	Asn	His	Lys	Asp	Ser	Gln	Phe	Glu	Thr	Asp	Ile	Val	Gln
			420					425					430		
Arg	Met	Glu	Gln	Glu	Thr	Gln	Arg	Lys	Leu	Glu	Gln	Leu	Arg	Ala	Glu
	435						440					445			
Leu	Asp	Glu	Met	Tyr	Gly	Gln	Gln	Ile	Val	Gln	Met	Lys	Gln	Glu	Leu
	450					455					460				
Ile	Arg	Gln	His	Met	Ala	Gln	Met	Glu	Glu	Met	Lys	Thr	Arg	His	Lys
465				470						475					480
Gly	Glu	Met	Glu	Asn	Ala	Leu	Arg	Ser	Tyr	Ser	Asn	Ile	Thr	Val	Asn
			485						490					495	
Glu	Asp	Gln	Ile	Lys	Leu	Met	Asn	Val	Ala	Ile	Asn	Glu	Leu	Asn	Ile
			500					505					510		
Lys	Leu	Gln	Asp	Thr	Asn	Ser	Gln	Lys	Glu	Lys	Leu	Lys	Glu	Glu	Leu
	515						520					525			
Gly	Leu	Ile	Leu	Glu	Glu	Lys	Cys	Ala	Leu	Gln	Arg	Gln	Leu	Glu	Asp
	530					535					540				
Leu	Val	Glu	Glu	Leu	Ser	Phe	Ser	Arg	Glu	Gln	Ile	Gln	Arg	Ala	Arg
545					550					555					560
Gln	Thr	Ile	Ala	Glu	Gln	Glu	Ser	Lys	Leu	Asn	Glu	Ala	His	Lys	Ser
			565						570					575	
Leu	Ser	Thr	Val	Glu	Asp	Leu	Lys	Ala	Glu	Ile	Val	Ser	Ala	Ser	Glu
			580					585					590		
Ser	Arg	Lys	Glu	Leu	Glu	Leu	Lys	His	Glu	Ala	Glu	Val	Thr	Asn	Tyr
		595					600					605			
Lys	Ile	Lys	Leu	Glu	Met	Leu	Glu	Lys	Glu	Lys	Asn	Ala	Val	Leu	Asp
	610					615					620				
Arg	Met	Ala	Glu	Ser	Gln	Glu	Ala	Glu	Leu	Glu	Arg	Leu	Arg	Thr	Gln
625					630					635					640
Leu	Leu	Phe	Ser	His	Glu	Glu	Glu	Leu	Ser	Lys	Leu	Lys	Glu	Asp	Leu
			645						650					655	
Glu	Ile	Glu	His	Arg	Ile	Asn	Ile	Glu	Lys	Leu	Lys	Asp	Asn	Leu	Gly
			660					665					670		
Ile	His	Tyr	Lys	Gln	Gln	Ile	Asp	Gly	Leu	Gln	Asn	Glu	Met	Ser	Gln
		675					680					685			
Lys	Ile	Glu	Thr	Met	Gln	Phe	Glu	Lys	Asp	Asn	Leu	Ile	Thr	Lys	Gln
	690					695					700				
Asn	Gln	Leu	Ile	Leu	Glu	Ile	Ser	Lys	Leu	Lys	Asp	Leu	Gln	Gln	Ser
705					710					715					720
Leu	Val	Asn	Ser	Lys	Ser	Glu	Glu	Met	Thr	Leu	Gln	Ile	Asn	Glu	Leu
			725						730					735	
Gln	Lys	Glu	Ile	Glu	Ile	Leu	Arg	Gln	Glu	Glu	Lys	Glu	Lys	Gly	Thr
			740					745					750		
Leu	Glu	Gln	Glu	Val	Gln	Glu	Leu	Gln	Leu	Lys	Thr	Glu	Leu	Leu	Glu
	755						760					765			
Lys	Gln	Met	Lys	Glu	Lys	Glu	Asn	Asp	Leu	Gln	Glu	Lys	Phe	Ala	Gln
	770					775					780				
Leu	Glu	Ala	Glu	Asn	Ser	Ile	Leu	Lys	Asp	Glu	Lys	Lys	Thr	Leu	Glu
785				790						795					800
Asp	Met	Leu	Lys	Ile	His	Thr	Pro	Val	Ser	Gln	Glu	Glu	Arg	Leu	Ile
				805					810					815	

Phe	Leu	Asp	Ser	Ile	Lys	Ser	Lys	Ser	Lys	Asp	Ser	Val	Trp	Glu	Lys	
			820						825				830			
Glu	Ile	Glu	Ile	Leu	Ile	Glu	Glu	Asn	Glu	Asp	Leu	Lys	Gln	Gln	Cys	
		835					840					845				
Ile	Gln	Leu	Asn	Glu	Glu	Ile	Glu	Lys	Gln	Arg	Asn	Thr	Phe	Ser	Phe	
	850					855					860					
Ala	Glu	Lys	Asn	Phe	Glu	Val	Asn	Tyr	Gln	Glu	Leu	Gln	Glu	Glu	Tyr	
865					870					875					880	
Ala	Cys	Leu	Leu	Lys	Val	Lys	Asp	Asp	Leu	Glu	Asp	Ser	Lys	Asn	Lys	
			885						890					895		
Gln	Glu	Leu	Glu	Tyr	Lys	Ser	Lys	Leu	Lys	Ala	Leu	Asn	Glu	Glu	Leu	
			900					905					910			
His	Leu	Gln	Arg	Ile	Asn	Pro	Thr	Thr	Val	Lys	Met	Lys	Ser	Ser	Val	
		915					920					925				
Phe	Asp	Glu	Asp	Lys	Thr	Phe	Val	Ala	Glu	Thr	Leu	Glu	Met	Gly	Glu	
	930					935					940					
Val	Val	Glu	Lys	Asp	Thr	Thr	Glu	Leu	Met	Glu	Lys	Leu	Glu	Val	Thr	
945					950					955					960	
Lys	Arg	Glu	Lys	Leu	Glu	Leu	Ser	Gln	Arg	Leu	Ser	Asp	Leu	Ser	Glu	
			965						970					975		
Gln	Leu	Lys	Gln	Lys	His	Gly	Glu	Ile	Ser	Phe	Leu	Asn	Glu	Glu	Val	
			980					985					990			
Lys	Ser	Leu	Lys	Gln	Glu	Lys	Glu	Gln	Val	Ser	Leu	Arg	Cys	Arg	Glu	
		995					1000					1005				
Leu	Glu	Ile	Ile	Ile	Asn	His	Asn	Arg	Ala	Glu	Asn	Val	Gln	Ser	Cys	
	1010					1015					1020					
Asp	Thr	Gln	Val	Ser	Ser	Leu	Leu	Asp	Gly	Val	Val	Thr	Met	Thr	Ser	
1025					1030					1035					1040	
Arg	Gly	Ala	Glu	Gly	Ser	Val	Ser	Lys	Val	Asn	Lys	Ser	Phe	Gly	Glu	
			1045						1050					1055		
Glu	Ser	Lys	Ile	Met	Val	Glu	Asp	Lys	Val	Ser	Phe	Glu	Asn	Met	Thr	
			1060					1065					1070			
Val	Gly	Glu	Glu	Ser	Lys	Gln	Glu	Gln	Leu	Ile	Leu	Asp	His	Leu	Pro	
		1075					1080					1085				
Ser	Val	Thr	Lys	Glu	Ser	Ser	Leu	Arg	Ala	Thr	Gln	Pro	Ser	Glu	Asn	
	1090					1095					1100					
Asp	Lys	Leu	Gln	Lys	Glu	Leu	Asn	Val	Leu	Lys	Ser	Glu	Gln	Asn	Asp	
1105					1110					1115					1120	
Leu	Arg	Leu	Gln	Met	Glu	Ala	Gln	Arg	Ile	Cys	Leu	Ser	Leu	Val	Tyr	
			1125						1130					1135		
Ser	Thr	His	Val	Asp	Gln	Val	Arg	Glu	Tyr	Met	Glu	Asn	Glu	Lys	Asp	
			1140					1145					1150			
Lys	Ala	Leu	Cys	Ser	Leu	Lys	Glu	Glu	Leu	Ile	Phe	Ala	Gln	Glu	Glu	
	1155						1160					1165				
Lys	Ile	Lys	Glu	Leu	Gln	Lys	Ile	His	Gln	Leu	Glu	Leu	Gln	Thr	Met	
	1170					1175					1180					
Lys	Thr	Gln	Glu	Thr	Gly	Asp	Glu	Gly	Lys	Pro	Leu	His	Leu	Leu	Ile	
1185					1190					1195					1200	
Gly	Lys	Leu	Gln	Lys	Ala	Val	Ser	Glu	Glu	Cys	Ser	Tyr	Phe	Leu	Gln	
			1205					1210						1215		
Thr	Leu	Cys	Ser	Val	Leu	Gly	Glu	Tyr	Thr	Pro	Ala	Leu	Lys	Cys		
			1220					1225					1230			
Glu	Val	Asn	Ala	Glu	Asp	Lys	Glu	Asn	Ser	Gly	Asp	Tyr	Ile	Ser	Glu	
		1235					1240					1245				
Asn	Glu	Asp	Pro	Glu	Leu	Gln	Asp	Tyr	Arg	Tyr	Glu	Val	Gln	Asp	Phe	
	1250					1255					1260					
Gln	Glu	Asn	Met	His	Thr	Leu	Leu	Asn	Lys	Val	Thr	Glu	Glu	Tyr	Asn	
1265					1270					1275					1280	
Lys	Leu	Leu	Val	Leu	Gln	Thr	Arg	Leu	Ser	Lys	Ile	Trp	Gly	Gln	Gln	
			1285					1290						1295		
Thr	Asp	Gly	Met	Lys	Leu	Glu	Phe	Gly	Glu	Glu	Asn	Leu	Pro	Lys	Glu	
			1300					1305					1310			

Glu	Thr	Glu	Phe	Leu	Ser	Ile	His	Ser	Gln	Met	Thr	Asn	Leu	Glu	Asp	1315	1320	1325
Ile	Asp	Val	Asn	His	Lys	Ser	Lys	Leu	Ser	Ser	Leu	Gln	Asp	Leu	Glu	1330	1335	1340
Lys	Thr	Lys	Leu	Glu	Glu	Gln	Val	Gln	Glu	Leu	Glu	Ser	Leu	Ile	Ser	1345	1350	1355
Ser	Leu	Gln	Gln	Gln	Leu	Lys	Glu	Thr	Glu	Gln	Asn	Tyr	Glu	Ala	Glu	1365	1370	1375
Ile	His	Cys	Leu	Gln	Lys	Arg	Leu	Gln	Ala	Val	Ser	Glu	Ser	Thr	Val	1380	1385	1390
Pro	Pro	Ser	Leu	Pro	Val	Asp	Ser	Val	Val	Ile	Thr	Glu	Ser	Asp	Ala	1395	1400	1405
Gln	Arg	Thr	Met	Tyr	Pro	Gly	Ser	Cys	Val	Lys	Lys	Asn	Ile	Asp	Gly	1410	1415	1420
Thr	Ile	Glu	Phe	Ser	Gly	Glu	Phe	Gly	Val	Lys	Glu	Glu	Thr	Asn	Ile	1425	1430	1435
Val	Lys	Leu	Leu	Glu	Lys	Gln	Tyr	Gln	Glu	Gln	Leu	Glu	Glu	Glu	Val	1445	1450	1455
Ala	Lys	Val	Ile	Val	Ser	Met	Ser	Ile	Ala	Phe	Ala	Gln	Gln	Thr	Glu	1460	1465	1470
Leu	Ser	Arg	Ile	Ser	Gly	Gly	Lys	Glu	Asn	Thr	Ala	Ser	Ser	Lys	Gln	1475	1480	1485
Ala	His	Ala	Val	Cys	Gln	Gln	Glu	Gln	His	Tyr	Phe	Asn	Glu	Met	Lys	1490	1495	1500
Leu	Ser	Gln	Asp	Gln	Ile	Gly	Phe	Gln	Thr	Phe	Glu	Thr	Val	Asp	Val	1505	1510	1515
Lys	Phe	Lys	Glu	Glu	Phe	Lys	Pro	Leu	Ser	Lys	Glu	Leu	Gly	Glu	His	1525	1530	1535
Gly	Lys	Glu	Ile	Leu	Leu	Ser	Asn	Ser	Asp	Pro	His	Asp	Ile	Pro	Glu	1540	1545	1550
Ser	Lys	Asp	Cys	Val	Leu	Thr	Ile	Ser	Glu	Glu	Met	Phe	Ser	Lys	Asp	1555	1560	1565
Lys	Thr	Phe	Ile	Val	Arg	Gln	Ser	Ile	His	Asp	Glu	Ile	Ser	Val	Ser	1570	1575	1580
Ser	Met	Asp	Ala	Ser	Arg	Gln	Leu	Met	Leu	Asn	Glu	Glu	Gln	Leu	Glu	1585	1590	1595
Asp	Met	Arg	Gln	Glu	Leu	Val	Arg	Gln	Tyr	Gln	Glu	His	Gln	Gln	Ala	1605	1610	1615
Thr	Gln	Arg	Ser	Ser	Ile	Asp	Asn	Glu	Asn	Leu	Val	Ser	Glu	Arg	Glu	1620	1625	1630
Arg	Val	Leu	Leu	Glu	Glu	Leu	Glu	Ala	Leu	Lys	Gln	Leu	Ser	Leu	Ala	1635	1640	1645
Gly	Arg	Glu	Lys	Leu	Cys	Cys	Glu	Leu	Arg	Asn	Ser	Ser	Thr	Gln	Thr	1650	1655	1660
Gln	Asn	Gly	Asn	Glu	Asn	Gln	Gly	Glu	Val	Glu	Gln	Thr	Phe	Lys		1665	1670	1675
Glu	Lys	Glu	Leu	Asp	Arg	Lys	Pro	Glu	Asp	Val	Pro	Pro	Glu	Ile	Leu	1685	1690	1695
Ser	Asn	Glu	Arg	Tyr	Ala	Leu	Gln	Lys	Ala	Asn	Asn	Arg	Leu	Leu	Lys	1700	1705	1710
Ile	Leu	Leu	Glu	Val	Val	Lys	Thr	Thr	Ala	Ala	Val	Glu	Glu	Thr	Ile	1715	1720	1725
Gly	Arg	His	Val	Leu	Gly	Ile	Leu	Asp	Arg	Ser	Ser	Lys	Ser	Gln	Ser	1730	1735	1740
Ser	Ala	Ser	Leu	Ile	Trp	Arg	Ser	Glu	Ala	Glu	Ala	Ser	Val	Lys	Ser	1745	1750	1755
Cys	Val	His	Glu	Glu	His	Thr	Arg	Val	Thr	Asp	Glu	Ser	Ile	Pro	Ser	1765	1770	1775
Tyr	Ser	Gly	Ser	Asp	Met	Pro	Arg	Asn	Asp	Ile	Asn	Met	Trp	Ser	Lys	1780	1785	1790
Val	Thr	Glu	Glu	Gly	Thr	Glu	Leu	Ser	Gln	Arg	Leu	Val	Arg	Ser	Gly	1795	1800	1805

Phe	Ala	Gly	Thr	Glu	Ile	Asp	Pro	Glu	Asn	Glu	Glu	Leu	Met	Leu	Asn
1810						1815						1820			
Ile	Ser	Ser	Arg	Leu	Gln	Ala	Ala	Val	Glu	Lys	Leu	Leu	Glu	Ala	Ile
1825					1830					1835					1840
Ser	Glu	Thr	Ser	Ser	Gln	Leu	Glu	His	Ala	Lys	Val	Thr	Gln	Thr	Glu
				1845					1850					1855	
Leu	Met	Arg	Glu	Ser	Phe	Arg	Gln	Lys	Gln	Glu	Ala	Thr	Glu	Ser	Leu
			1860					1865					1870		
Lys	Cys	Gln	Glu	Glu	Leu	Arg	Glu	Arg	Leu	His	Glu	Glu	Ser	Arg	Ala
		1875					1880						1885		
Arg	Glu	Gln	Leu	Ala	Val	Glu	Leu	Ser	Lys	Ala	Glu	Gly	Val	Ile	Asp
		1890				1895					1900				
Gly	Tyr	Ala	Asp	Glu	Lys	Thr	Leu	Phe	Glu	Arg	Gln	Ile	Gln	Glu	Lys
1905					1910					1915					1920
Thr	Asp	Ile	Ile	Asp	Arg	Leu	Glu	Gln	Glu	Leu	Leu	Cys	Ala	Ser	Asn
				1925					1930					1935	
Arg	Leu	Gln	Glu	Leu	Glu	Ala	Glu	Gln	Gln	Gln	Ile	Gln	Glu	Glu	Arg
			1940				1945						1950		
Glu	Leu	Leu	Ser	Arg	Gln	Lys	Glu	Ala	Met	Lys	Ala	Glu	Ala	Gly	Pro
		1955				1960						1965			
Val	Glu	Gln	Gln	Leu	Leu	Gln	Glu	Thr	Glu	Lys	Leu	Met	Lys	Glu	Lys
	1970					1975					1980				
Leu	Glu	Val	Gln	Cys	Gln	Ala	Glu	Lys	Val	Arg	Asp	Asp	Leu	Gln	Lys
1985					1990					1995					2000
Gln	Val	Lys	Ala	Leu	Glu	Ile	Asp	Val	Glu	Glu	Gln	Val	Ser	Arg	Phe
			2005						2010					2015	
Ile	Glu	Leu	Glu	Gln	Glu	Lys	Asn	Thr	Glu	Leu	Met	Asp	Leu	Arg	Gln
			2020					2025					2030		
Gln	Asn	Gln	Ala	Leu	Glu	Lys	Gln	Leu	Glu	Lys	Met	Arg	Lys	Phe	Leu
		2035					2040					2045			
Asp	Glu	Gln	Ala	Ile	Asp	Arg	Glu	His	Glu	Arg	Asp	Val	Phe	Gln	Gln
	2050				2055						2060				
Glu	Ile	Gln	Lys	Leu	Glu	Gln	Gln	Leu	Lys	Val	Val	Pro	Arg	Phe	Gln
2065					2070					2075					2080
Pro	Ile	Ser	Glu	His	Gln	Thr	Arg	Glu	Val	Glu	Gln	Leu	Ala	Asn	His
				2085					2090					2095	
Leu	Lys	Glu	Lys	Thr	Asp	Lys	Cys	Ser	Glu	Leu	Leu	Leu	Ser	Lys	Glu
			2100				2105						2110		
Gln	Leu	Gln	Arg	Asp	Ile	Gln	Glu	Arg	Asn	Glu	Glu	Ile	Glu	Lys	Leu
		2115					2120					2125			
Glu	Phe	Arg	Val	Arg	Glu	Leu	Glu	Gln	Ala	Leu	Leu	Val	Ser	Ala	Asp
	2130				2135						2140				
Thr	Phe	Gln	Lys	Val	Glu	Asp	Arg	Lys	His	Phe	Gly	Ala	Val	Glu	Ala
2145					2150					2155					2160
Lys	Pro	Glu	Leu	Ser	Leu	Glu	Val	Gln	Leu	Gln	Ala	Glu	Arg	Asp	Ala
				2165				2170						2175	
Ile	Asp	Arg	Lys	Glu	Lys	Glu	Ile	Thr	Asn	Leu	Glu	Glu	Gln	Leu	Glu
			2180					2185					2190		
Gln	Phe	Arg	Glu	Glu	Leu	Glu	Asn	Lys	Asn	Glu	Glu	Val	Gln	Gln	Leu
		2195					2200					2205			
His	Met	Gln	Leu	Glu	Ile	Gln	Lys	Lys	Glu	Ser	Thr	Thr	Arg	Leu	Gln
	2210					2215					2220				
Glu	Leu	Glu	Gln	Glu	Asn	Lys	Leu	Phe	Lys	Asp	Asp	Met	Glu	Lys	Leu
2225					2230					2235					2240
Gly	Leu	Ala	Ile	Lys	Glu	Ser	Asp	Ala	Met	Ser	Thr	Gln	Asp	Gln	His
				2245					2250					2255	
Val	Leu	Phe	Gly	Lys	Phe	Ala	Gln	Ile	Gln	Glu	Lys	Glu	Val	Glu	
			2260					2265					2270		
Ile	Asp	Gln	Leu	Asn	Glu	Gln	Val	Thr	Lys	Leu	Gln	Gln	Gln	Leu	Lys
		2275					2280					2285			
Ile	Thr	Thr	Asp	Asn	Lys	Val	Ile	Glu	Glu	Lys	Asn	Glu	Leu	Ile	Arg
	2290					2295					2300				

Asp	Leu	Glu	Thr	Gln	Ile	Glu	Cys	Leu	Met	Ser	Asp	Gln	Glu	Cys	Val	2305	2310	2315	2320
Lys	Arg	Asn	Arg	Glu	Glu	Glu	Ile	Glu	Gln	Leu	Asn	Glu	Val	Ile	Glu		2325	2330	2335
Lys	Leu	Gln	Gln	Glu	Leu	Ala	Asn	Ile	Gly	Gln	Lys	Thr	Ser	Met	Asn	2340	2345		2350
Ala	His	Ser	Leu	Ser	Glu	Glu	Ala	Asp	Ser	Leu	Lys	His	Gln	Leu	Asp	2355	2360		2365
Val	Val	Ile	Ala	Glu	Lys	Leu	Ala	Leu	Glu	Gln	Gln	Val	Glu	Thr	Ala	2370	2375		2380
Asn	Glu	Glu	Met	Thr	Phe	Met	Lys	Asn	Val	Leu	Lys	Glu	Thr	Asn	Phe	2385	2390		2395
Lys	Met	Asn	Gln	Leu	Thr	Gln	Glu	Leu	Phe	Ser	Leu	Lys	Arg	Glu	Arg		2405	2410	2415
Glu	Ser	Val	Glu	Lys	Ile	Gln	Ser	Ile	Pro	Glu	Asn	Ser	Val	Asn	Val	2420	2425		2430
Ala	Ile	Asp	His	Leu	Ser	Lys	Asp	Lys	Pro	Glu	Leu	Glu	Val	Val	Leu	2435	2440		2445
Thr	Glu	Asp	Ala	Leu	Lys	Ser	Leu	Glu	Asn	Gln	Thr	Tyr	Phe	Lys	Ser	2450	2455		2460
Phe	Glu	Glu	Asn	Gly	Lys	Gly	Ser	Ile	Ile	Asn	Leu	Glu	Thr	Arg	Leu	2465	2470		2475
Leu	Gln	Leu	Glu	Ser	Thr	Val	Ser	Ala	Lys	Asp	Leu	Glu	Leu	Thr	Gln		2485	2490	2495
Cys	Tyr	Lys	Gln	Ile	Lys	Asp	Met	Gln	Glu	Gln	Gly	Gln	Phe	Glu	Thr	2500	2505		2510
Glu	Met	Leu	Gln	Lys	Lys	Ile	Val	Asn	Leu	Gln	Lys	Ile	Val	Glu	Glu	2515	2520		2525
Lys	Val	Ala	Ala	Ala	Leu	Val	Ser	Gln	Ile	Gln	Leu	Glu	Ala	Val	Gln	2530	2535		2540
Glu	Tyr	Ala	Lys	Phe	Cys	Gln	Asp	Asn	Gln	Thr	Ile	Ser	Ser	Glu	Pro	2545	2550		2555
Glu	Arg	Thr	Asn	Ile	Gln	Asn	Leu	Asn	Gln	Leu	Arg	Glu	Asp	Glu	Leu		2565	2570	2575
Gly	Ser	Asp	Ile	Ser	Ala	Leu	Thr	Leu	Arg	Ile	Ser	Glu	Leu	Glu	Ser	2580	2585		2590
Gln	Val	Val	Glu	Met	His	Thr	Ser	Leu	Ile	Leu	Glu	Lys	Glu	Gln	Val	2595	2600		2605
Glu	Ile	Ala	Glu	Lys	Asn	Val	Leu	Glu	Lys	Glu	Lys	Lys	Leu	Leu	Glu	2610	2615		2620
Leu	Gln	Lys	Leu	Leu	Glu	Gly	Asn	Glu	Lys	Lys	Gln	Arg	Glu	Lys	Glu	2625	2630		2635
Lys	Lys	Arg	Ser	Pro	Gln	Asp	Val	Glu	Val	Leu	Lys	Thr	Thr	Thr	Glu		2645	2650	2655
Leu	Phe	His	Ser	Asn	Glu	Glu	Ser	Gly	Phe	Phe	Asn	Glu	Leu	Glu	Ala	2660	2665		2670
Leu	Arg	Ala	Glu	Ser	Val	Ala	Thr	Lys	Ala	Glu	Leu	Ala	Ser	Tyr	Lys	2675	2680		2685
Glu	Lys	Ala	Glu	Lys	Leu	Gln	Glu	Glu	Leu	Leu	Val	Lys	Glu	Thr	Asn	2690	2695		2700
Met	Thr	Ser	Leu	Gln	Lys	Asp	Leu	Ser	Gln	Val	Arg	Asp	His	Leu	Ala	2705	2710		2715
Glu	Ala	Lys	Glu	Lys	Leu	Ser	Ile	Leu	Glu	Lys	Glu	Asp	Glu	Thr	Glu		2725	2730	2735
Val	Gln	Glu	Ser	Lys	Lys	Ala	Cys	Met	Phe	Glu	Pro	Leu	Pro	Ile	Lys	2740	2745		2750
Leu	Ser	Lys	Ser	Ile	Ala	Ser	Gln	Thr	Asp	Gly	Thr	Leu	Lys	Ile	Ser	2755	2760		2765
Ser	Ser	Asn	Gln	Thr	Pro	Gln	Ile	Leu	Val	Lys	Asn	Ala	Gly	Ile	Gln	2770	2775		2780
Ile	Asn	Leu	Gln	Ser	Glu	Cys	Ser	Ser	Glu	Glu	Val	Thr	Glu	Ile	Ile	2785	2790	2795	2800

Ser	Gln	Phe	Thr	Glu	Lys	Ile	Glu	Lys	Met	Gln	Glu	Leu	His	Ala	Ala	
				2805					2810						2815	
Glu	Ile	Leu	Asp	Met	Glu	Ser	Arg	His	Ile	Ser	Glu	Thr	Glu	Thr	Leu	
			2820					2825					2830			
Lys	Arg	Glu	His	Tyr	Val	Ala	Val	Gln	Leu	Leu	Lys	Glu	Glu	Cys	Gly	
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Thr	Leu	Lys	Ala	Val	Ile	Gln	Cys	Leu	Arg	Ser	Lys	Glu	Val	Phe	Gly	
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Phe	Tyr	Asn	Met	Cys	Phe	Ser	Thr	Leu	Cys	Asp	Ser	Gly	Ser	Asp	Trp	
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Gly	Gln	Gly	Ile	Tyr	Leu	Thr	His	Ser	Gln	Gly	Phe	Asp	Ile	Ala	Ser	
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Lys	Ile	Lys	Gly	Leu	Leu	Arg	Ala	Val	His	Asn	Glu	Gly	Met	Gln	Val	
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Leu	Ser	Leu	Thr	Glu	Ser	Pro	Tyr	Ser	Asp	Gly	Glu	Asp	His	Ser	Ile	
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Glu	Ala	Glu	Val	Tyr	Asp	Ser	Ser	Gln	Ser	His	Glu	Ser	Phe	Ser	Asp	
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Trp	Arg	Gly	Glu	Leu	Leu	Leu	Ala	Leu	Gln	Gln	Val	Phe	Leu	Glu	Glu	
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Arg	Ser	Val	Leu	Leu	Ala	Ala	Phe	Arg	Thr	Glu	Leu	Thr	Ala	Leu	Gly	
	3010				3015						3020					
Thr	Thr	Asp	Ala	Val	Gly	Leu	Leu	Asn	Cys	Leu	Glu	Gln	Arg	Ile	Gln	
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Glu	Gln	Gly	Val	Glu	Tyr	Gln	Ala	Ala	Met	Glu	Cys	Leu	Gln	Lys	Ala	
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Asp	Arg	Arg	Ser	Leu	Leu	Ser	Glu	Ile	Gln	Ala	Leu	His	Ala	Gln	Met	
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Asn	Gly	Arg	Lys	Ile	Thr	Leu	Lys	Arg	Glu	Gln	Glu	Ser	Glu	Lys	Pro	
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Ser	Gln	Glu	Leu	Leu	Glu	Tyr	Asn	Ile	Gln	Gln	Lys	Gln	Ser	Gln	Met	
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Leu	Glu	Met	Gln	Val	Glu	Leu	Ser	Ser	Met	Lys	Asp	Arg	Ala	Thr	Glu	
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Leu	Gln	Glu	Gln	Leu	Ser	Ser	Glu	Lys	Met	Val	Val	Ala	Glu	Leu	Lys	
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Ser	Glu	Leu	Ala	Gln	Thr	Lys	Leu	Glu	Leu	Glu	Thr	Thr	Leu	Lys	Ala	
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Gln	His	Lys	His	Leu	Lys	Glu	Leu	Glu	Ala	Phe	Arg	Leu	Glu	Val	Lys	
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Asp	Lys	Thr	Asp	Glu	Val	His	Leu	Leu	Asn	Asp	Thr	Leu	Ala	Ser	Glu	
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Gln	Lys	Lys	Ser	Arg	Glu	Leu	Gln	Trp	Ala	Leu	Glu	Lys	Glu	Lys	Ala	
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Lys	Leu	Gly	Arg	Ser	Glu	Glu	Arg	Asp	Lys	Glu	Glu	Leu	Glu	Asp	Leu	
			3205						3210					3215		
Lys	Phe	Ser	Leu	Glu	Ser	Gln	Lys	Gln	Arg	Asn	Leu	Gln	Leu	Asn	Leu	
	3220							3225					3230			
Leu	Leu	Glu	Gln	Gln	Lys	Gln	Leu	Leu	Asn	Glu	Ser	Gln	Gln	Lys	Ile	
	3235							3240					3245			
Glu	Ser	Gln	Arg	Met	Leu	Tyr	Asp	Ala	Gln	Leu	Ser	Glu	Glu	Gln	Gly	
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Arg	Asn	Leu	Glu	Leu	Gln	Val	Leu	Leu	Glu	Ser	Glu	Lys	Val	Arg	Ile	
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Arg	Glu	Met	Ser	Ser	Thr	Leu	Asp	Arg	Glu	Arg	Glu	Leu	His	Ala	Gln	
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 Thr Leu Gln Thr Glu Gln Glu Ala Asn Thr Glu Gly Gln Lys Lys Met
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 Gly Ile Met Gln Glu Phe Gln Lys Gln Glu Leu Glu Arg Glu Glu Lys
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 Gly Gln Gln Gly Glu Glu Pro Ser Leu Val Ser Pro Ser Thr Ser Cys
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 Gly Ser Leu Thr Glu Arg Leu Leu Arg Gln Asn Ala Glu Leu Thr Gly
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 Met Lys Leu Glu Glu Gln Ile Arg Trp Tyr Arg Gln Thr Gly Ala Gly
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 Arg Asp Asn Ser Ser Arg Phe Ser Leu Asn Gly Gly Ala Asn Ile Glu
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 Leu Gln Lys Ser Leu Lys Arg Ala Glu Ala Glu Val Tyr Lys Leu Lys
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 Glu His Val Thr Leu Lys Arg Ile Tyr Gly Lys Tyr Leu Arg Ala Glu
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 Ser Phe Arg Lys Ala Leu Ile Tyr Gln Lys Lys Tyr Leu Leu Leu Leu
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 Arg Met Gly Gly Gln Pro Ala Phe Thr Asp Leu Glu Val Ile Thr Asn
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 Arg Pro Lys Gly Phe Thr Arg Phe Arg Ser Ala Val Arg Val Ser Ile
 3730 3735 3740
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 Gly Ser Val Ser Ile Asn Ile Asn Arg Asp Gly Phe Gly Leu Asn Gln
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 Gly Ala Glu Lys Thr Asp Ser Phe Tyr His Ser Ser Gly Gly Leu Glu
 3780 3785 3790

Leu Tyr Gly Glu Pro Arg His Thr Thr Tyr Arg Ser Arg Ser Asp Leu
 3795 3800 3805
 Asp Tyr Ile Arg Ser Pro Leu Pro Phe Gln Asn Arg Tyr Pro Gly Thr
 3810 3815 3820
 Pro Ala Asp Phe Asn Pro Gly Ser Leu Ala Cys Ser Gln Leu Gln Asn
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 Tyr Asp Pro Asp Arg Ala Leu Thr Asp Tyr Ile Thr Arg Leu Glu Ala
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 20 25 30
 Cys Arg Phe Ile Glu Leu Glu Gln Glu Lys Asn Ala Glu Leu Met Asp
 35 40 45
 Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu Lys Met Arg
 50 55 60
 Lys Met Asp Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu
 65 70 75 80
 Lys Met Arg Lys Phe Leu Asp Glu Gln Ala Ile Asp Arg Glu His Glu
 85 90 95
 Arg Asp Val Phe Gln Gln Glu Ile Gln Lys Leu Glu Gln Gln Leu Lys
 100 105 110
 Leu Val Pro Arg Phe Gln Pro Ile Ser Glu His Gln Thr Arg Glu Val
 115 120 125
 Glu Gln Leu Thr Asn His Leu Lys Glu Lys Thr Asp Lys Cys Ser Glu
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 Leu Leu Leu Ser Lys Glu Gln Leu Gln Arg Asp Val Gln Glu Arg Asn
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 Glu Glu Ile Glu Lys Leu Glu Cys Arg Val Arg Glu Leu Glu Gln Ala
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 Phe Gly Ala Val Glu Pro Lys Ala Glu Leu Cys Leu Glu Val Gln Leu
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 Gln Ala Glu Arg Asp Ala Ile Asp Arg Lys Glu Lys Glu Ile Thr Asn
 210 215 220
 Leu Glu Glu Gln Leu Glu Gln Phe Arg Glu Glu Leu Glu Asn Lys Asn
 225 230 235 240
 Glu Glu Val Gln Gln Leu His Met Gln Leu Glu Ile Gln Lys Lys Glu
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 Ser Thr Thr Arg Leu Gln Glu Leu Glu Gln Glu Asn Lys Leu Phe Lys
 260 265 270
 Asp Glu Met Glu Lys Leu Gly Phe Ala Ile Lys Glu Ser Asp Ala Val
 275 280 285
 Ser Pro Gln Asp Gln Gln Val Leu Phe Gly Lys Phe Ala Gln Ile Ile
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 His Glu Lys Glu Val Glu Ile Asp Arg Leu Asn Glu Gln Ile Ile Lys
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 Leu Gln Gln Gln Leu Lys Ile Thr Thr Asp Asn Lys Val Ile Glu Glu
 325 330 335
 Lys Asn Glu Leu Ile Arg Asp Leu Glu Ala Gln Ile Glu Cys Leu Met

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Ser	Asp	Gln	Glu	Arg	Val	Arg	Lys	Asn	Arg	Glu	Glu	Glu	Ile	Glu	Gln
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Leu	Asn	Glu	Val	Ile	Glu	Lys	Leu	Gln	Gln	Glu	Leu	Ala	Asn	Ile	Asp
	370					375					380				
Gln	Lys	Thr	Ser	Val	Asp	Pro	Ser	Ser	Leu	Ser	Glu	Glu	Ala	Asp	Ser
385					390					395					400
Leu	Lys	His	Gln	Leu	Asp	Lys	Val	Ile	Ala	Glu	Lys	Leu	Ala	Leu	Glu
				405					410						415
His	Gln	Val	Glu	Thr	Thr	Asn	Glu	Glu	Met	Ala	Val	Thr	Lys	Asn	Val
			420					425					430		
Leu	Lys	Glu	Thr	Asn	Phe	Lys	Met	Asn	Gln	Leu	Thr	Gln	Glu	Leu	Cys
		435					440					445			
Ser	Leu	Lys	Arg	Glu	Arg	Glu	Lys	Met	Glu	Arg	Ile	Gln	Ser	Val	Pro
	450					455					460				
Glu	Lys	Ser	Val	Asn	Met	Ser	Val	Gly	Asp	Leu	Ser	Lys	Asp	Lys	Pro
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Glu	Met	Asp	Leu	Ile	Pro	Thr	Glu	Asp	Ala	Leu	Ala	Gln	Leu	Glu	Thr
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Gln	Thr	Gln	Leu	Arg	Ser	Ser	Glu	Glu	Ser	Ser	Lys	Val	Ser	Leu	Ser
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Ser	Leu	Glu	Thr	Lys	Leu	Leu	Gln	Leu	Glu	Ser	Thr	Val	Ser	Thr	Lys
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Asp	Leu	Glu	Leu	Thr	Gln	Cys	Tyr	Lys	Gln	Ile	Gln	Asp	Met	Arg	Glu
	530					535					540				
Gln	Gly	Arg	Ser	Glu	Thr	Glu	Met	Leu	Gln	Thr	Lys	Ile	Val	Ser	Leu
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Gln	Lys	Val	Leu	Glu	Lys	Val	Ala	Ala	Ala	Leu	Val	Ser	Gln	Val	
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Gln	Leu	Glu	Ala	Val	Gln	Glu	Tyr	Val	Lys	Leu	Cys	Ala	Asp	Lys	Pro
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Ala	Val	Ser	Ser	Asp	Pro	Ala	Arg	Thr	Glu	Val	Pro	Gly	Leu	Ser	Gln
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Leu	Ala	Gly	Asn	Thr	Met	Glu	Ser	Asp	Val	Ser	Ala	Leu	Thr	Trp	Arg
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Ile	Ser	Glu	Leu	Glu	Ser	Gln	Leu	Val	Glu	Met	His	Ser	Ser	Leu	Ile
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Ser	Glu	Lys	Glu	Gln	Val	Glu	Ile	Ala	Glu	Lys	Asn	Ala	Leu	Glu	Lys
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Glu	Lys	Lys	Leu	Gln	Glu	Leu	Gln	Lys	Leu	Val	Gln	Asp	Ser	Glu	Thr
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Lys	Gln	Arg	Glu	Arg	Glu	Arg	Gln	Ser	Arg	Leu	His	Gly	Asp	Leu	Gly
		675					680					685			
Val	Leu	Glu	Ser	Thr	Thr	Ser	Glu	Glu	Ser	Gly	Val	Phe	Gly	Glu	Leu
	690					695					700				
Glu	Ala	Leu	Arg	Ala	Glu	Ser	Ala	Ala	Pro	Lys	Gly	Glu	Leu	Ala	Asn
705					710					715					720
Tyr	Lys	Glu	Leu	Ala	Glu	Lys	Leu	Gln	Glu	Glu	Leu	Leu	Val	Lys	Glu
				725					730					735	
Thr	Asn	Met	Ala	Ser	Leu	Pro	Lys	Glu	Leu	Ser	His	Val	Arg	Asp	Gln
			740					745					750		
Leu	Thr	Glu	Ala	Glu	Asp	Lys	Leu	Ser	His	Phe	Ser	Glu	Lys	Glu	Asp
		755					760					765			
Lys	Thr	Glu	Val	Gln	Glu	His	Gly	Thr	Ile	Cys	Ile	Leu	Glu	Pro	Cys
	770					775					780				
Pro	Gly	Gln	Ile	Gly	Glu	Ser	Phe	Ala	Ser	Gln	Thr	Glu	Gly	Ala	Val
785					790					795					800
Gln	Val	Asn	Ser	His	Thr	Gln	Thr	Pro	Gln	Ile	Pro	Val	Arg	Ser	Val
				805					810					815	
Gly	Ile	Gln	Thr	His	Ser	Gln	Ser	Asp	Ser	Ser	Pro	Glu	Glu	Val	Ala
			820					825					830		
Glu	Ile	Ile	Ser	Arg	Phe	Thr	Glu	Lys	Ile	Glu	Gln	Met	Arg	Glu	Leu

Ala	Asn	Leu	Val	Thr	Asp	Ala	Arg	Val	Arg	Val	Lys	Tyr	Gln	Gln	Leu
		195					200					205			
Ile	Thr	Asn	Ser	Phe	Val	Glu	Cys	Asn	Gln	Leu	Leu	Arg	Trp	Cys	Pro
	210					215					220				
Ser	Val	Asp	Cys	Thr	Tyr	Ala	Val	Lys	Val	Pro	Tyr	Ala	Glu	Pro	Arg
225					230					235					240
Arg	Val	His	Cys	Lys	Cys	Gly	His	Val	Phe	Cys	Phe	Ala	Cys	Gly	Glu
				245					250					255	
Asn	Trp	His	Asp	Pro	Val	Lys	Cys	Arg	Trp	Leu	Lys	Lys	Trp	Ile	Lys
			260					265					270		
Lys	Cys	Asp	Asp	Asp	Ser	Glu	Thr	Ser	Asn	Trp	Ile	Ala	Ala	Asn	Thr
		275					280					285			
Lys	Glu	Cys	Pro	Arg	Cys	Ser	Val	Thr	Ile	Glu	Lys	Asp	Gly	Gly	Cys
	290					295					300				
Asn	His	Met	Val	Cys	Lys	Asn	Gln	Asn	Cys	Lys	Asn	Glu	Phe	Cys	Trp
305					310					315					320
Val	Cys	Leu	Gly	Ser	Trp	Glu	Pro	His	Gly	Ser	Ser	Trp	Tyr	Asn	Cys
				325					330					335	
Asn	Arg	Tyr	Asp	Glu	Asp	Glu	Ala	Lys	Thr	Ala	Arg	Asp	Ala	Gln	Glu
			340					345					350		
Lys	Leu	Arg	Ser	Ser	Leu	Ala	Arg	Tyr	Leu	His	Tyr	Tyr	Asn	Arg	Tyr
		355					360					365			
Met	Asn	His	Met	Gln	Ser	Met	Lys	Phe	Glu	Asn	Lys	Leu	Tyr	Ala	Ser
	370					375					380				
Val	Lys	Gln	Lys	Met	Glu	Glu	Met	Gln	Gln	His	Asn	Met	Ser	Trp	Ile
385					390					395					400
Glu	Val	Gln	Phe	Leu	Lys	Lys	Ala	Val	Asp	Ile	Leu	Cys	Gln	Cys	Arg
				405					410					415	
Gln	Thr	Leu	Met	Tyr	Thr	Tyr	Val	Phe	Ala	Tyr	Tyr	Leu	Lys	Lys	Asn
			420					425					430		
Asn	Gln	Ser	Met	Ile	Phe	Glu	Asp	Asn	Gln	Lys	Asp	Leu	Glu	Ser	Ala
		435					440					445			
Thr	Glu	Met	Leu	Ser	Glu	Tyr	Leu	Glu	Arg	Asp	Ile	Thr	Ser	Glu	Asn
	450					455					460				
Leu	Ala	Asp	Ile	Lys	Gln	Lys	Val	Gln	Asp	Lys	Tyr	Arg	Tyr	Cys	Glu
465					470					475					480
Lys	Arg	Cys	Ser	Val	Leu	Leu	Lys	His	Val	His	Glu	Gly	Tyr	Asp	Lys
				485					490					495	
Glu	Trp	Trp	Glu	Tyr	Thr	Glu									
			500												

<210> 14
 <211> 961
 <212> PRT
 <213> Homo sapiens

<400> 14

Met	Leu	Leu	Leu	Leu	Leu	Leu	Ala	Pro	Leu	Phe	Leu	Arg	Pro	Pro	Gly
1				5					10					15	
Ala	Gly	Gly	Ala	Gln	Thr	Pro	Asn	Ala	Thr	Ser	Glu	Gly	Cys	Gln	Ile
			20					25					30		
Ile	His	Pro	Pro	Trp	Glu	Gly	Gly	Ile	Arg	Tyr	Arg	Gly	Leu	Thr	Arg
		35					40					45			
Asp	Gln	Val	Lys	Ala	Ile	Asn	Phe	Leu	Pro	Val	Asp	Tyr	Glu	Ile	Glu
	50					55					60				
Tyr	Val	Cys	Arg	Gly	Glu	Arg	Glu	Val	Val	Gly	Pro	Lys	Val	Arg	Lys
65					70					75					80
Cys	Leu	Ala	Asn	Gly	Ser	Trp	Thr	Asp	Met	Asp	Thr	Pro	Ser	Arg	Cys
				85					90					95	
Val	Arg	Ile	Cys	Ser	Lys	Ser	Tyr	Leu	Thr	Leu	Glu	Asn	Gly	Lys	Val
			100					105					110		
Phe	Leu	Thr	Gly	Gly	Asp	Leu	Pro	Ala	Leu	Asp	Gly	Ala	Arg	Val	Asp

		115					120					125				
Phe 130	Arg	Cys	Asp	Pro	Asp	Phe 135	His	Leu	Val	Gly	Ser 140	Ser	Arg	Ser	Ile	
Cys 145	Ser	Gln	Gly	Gln	Trp 150	Ser	Thr	Pro	Lys	Pro 155	His	Cys	Gln	Val	Asn 160	
Arg	Thr	Pro	His	Ser 165	Glu	Arg	Arg	Ala	Val 170	Tyr	Ile	Gly	Ala	Leu	Phe 175	
Pro	Met	Ser	Gly 180	Gly	Trp	Pro	Gly	Gly 185	Gln	Ala	Cys	Gln	Pro	Ala	Val	
Glu	Met 195	Ala	Leu	Glu	Asp	Val	Asn 200	Ser	Arg	Arg	Asp	Ile	Leu	Pro	Asp	
Tyr	Glu 210	Leu	Lys	Leu	Ile	His 215	His	Asp	Ser	Lys	Cys 220	Asp	Pro	Gly	Gln	
Ala 225	Thr	Lys	Tyr	Leu	Tyr 230	Glu	Leu	Leu	Tyr	Asn 235	Asp	Pro	Ile	Lys	Ile 240	
Ile	Leu	Met	Pro	Gly 245	Cys	Ser	Ser	Val	Ser 250	Thr	Leu	Val	Ala	Glu	Ala 255	
Ala	Arg	Met	Trp 260	Asn	Leu	Ile	Val	Leu	Ser 265	Tyr	Gly	Ser	Ser	Ser	Pro	
Ala	Leu	Ser 275	Asn	Arg	Gln	Arg	Phe 280	Pro	Thr	Phe	Phe	Arg	Thr	His	Pro	
Ser	Ala 290	Thr	Leu	His	Asn	Pro 295	Thr	Arg	Val	Lys	Leu 300	Phe	Glu	Lys	Trp	
Gly 305	Trp	Lys	Lys	Ile	Ala 310	Thr	Ile	Gln	Gln	Thr	Thr 315	Glu	Val	Phe	Thr 320	
Ser	Thr	Leu	Asp	Asp 325	Leu	Glu	Glu	Arg	Val	Lys	Glu	Ala	Gly	Ile	Glu 335	
Ile	Thr	Phe	Arg 340	Gln	Ser	Phe	Phe	Ser	Asp	Pro	Ala	Val	Pro	Val	Lys	
Asn	Leu	Lys 355	Arg	Gln	Asp	Ala	Arg	Ile	Ile	Val	Gly	Leu 365	Phe	Tyr	Glu	
Thr	Glu 370	Ala	Arg	Lys	Val	Phe 375	Cys	Glu	Val	Tyr	Lys 380	Glu	Arg	Leu	Phe	
Gly 385	Lys	Lys	Tyr	Val	Trp 390	Phe	Leu	Ile	Gly	Trp 395	Tyr	Ala	Asp	Asn	Trp 400	
Phe	Lys	Ile	Tyr	Asp 405	Pro	Ser	Ile	Asn	Cys	Thr	Val	Asp	Glu	Met	Thr 415	
Glu	Ala	Val	Glu 420	Gly	His	Ile	Thr	Thr	Glu	Ile	Val	Met	Leu	Asn	Pro	
Ala	Asn 435	Thr	Arg	Ser	Ile	Ser	Asn 440	Met	Thr	Ser	Gln	Glu 445	Phe	Val	Glu	
Lys	Leu 450	Thr	Lys	Arg	Leu	Lys 455	Arg	His	Pro	Glu	Glu	Thr	Gly	Gly	Phe	
Gln 465	Glu	Ala	Pro	Leu	Ala 470	Tyr	Asp	Ala	Ile	Trp 475	Ala	Leu	Ala	Leu	Ala 480	
Leu	Asn	Lys	Thr	Ser 485	Gly	Gly	Gly	Gly	Arg	Ser	Gly	Val	Arg	Leu	Glu 495	
Asp	Phe	Asn	Tyr 500	Asn	Asn	Gln	Thr	Ile	Thr	Asp	Gln	Ile	Tyr	Arg	Ala	
Met	Asn 515	Ser	Ser	Ser	Phe	Glu	Gly 520	Val	Ser	Gly	His	Val 525	Val	Phe	Asp	
Ala	Ser 530	Gly	Ser	Arg	Met	Ala 535	Trp	Thr	Leu	Ile	Glu 540	Gln	Leu	Gln	Gly	
Gly 545	Ser	Tyr	Lys	Lys	Ile 550	Gly	Tyr	Tyr	Asp	Ser 555	Thr	Lys	Asp	Asp	Leu 560	
Ser	Trp	Ser	Lys	Thr 565	Asp	Lys	Trp	Ile	Gly 570	Gly	Ser	Pro	Pro	Ala	Asp	
Gln	Thr	Leu	Val 580	Ile	Lys	Thr	Phe	Arg 585	Phe	Leu	Ser	Gln	Lys	Leu	Phe	
Ile	Ser	Val	Ser 595	Val	Leu	Ser	Ser	Leu	Gly	Ile	Val	Leu 605	Ala	Val	Val	
Cys	Leu	Ser	Phe	Asn	Ile	Tyr	Asn	Ser	His	Val	Arg	Tyr	Ile	Gln	Asn	

610	615	620
Ser Gln Pro Asn Leu	Asn Asn Leu Thr Ala Val	Gly Cys Ser Leu Ala
625	630	635
Leu Ala Ala Val Phe	Pro Leu Gly Leu Asp	Gly Tyr His Ile Gly Arg
645	650	655
Asn Gln Phe Pro Phe	Val Cys Gln Ala Arg	Leu Trp Leu Leu Gly Leu
660	665	670
Gly Phe Ser Leu Gly	Tyr Gly Ser Met Phe	Thr Lys Ile Trp Trp Val
675	680	685
His Thr Val Phe Thr	Lys Lys Glu Glu Lys	Lys Glu Trp Arg Lys Thr
690	695	700
Leu Glu Pro Trp Lys	Leu Tyr Ala Thr Val	Gly Leu Leu Val Gly Met
705	710	715
Asp Val Leu Thr Leu	Ala Ile Trp Gln Ile	Val Asp Pro Leu His Arg
725	730	735
Thr Ile Glu Thr Phe	Ala Lys Glu Glu Pro	Lys Glu Asp Ile Asp Val
740	745	750
Ser Ile Leu Pro Gln	Leu Glu His Cys Ser	Ser Arg Lys Met Asn Thr
755	760	765
Trp Leu Gly Ile Phe	Tyr Gly Tyr Lys Gly	Leu Leu Leu Leu Gly
770	775	780
Ile Phe Leu Ala Tyr	Glu Thr Lys Ser Val	Ser Thr Glu Lys Ile Asn
785	790	795
Asp His Arg Ala Val	Gly Met Ala Ile Tyr	Asn Val Ala Val Leu Cys
805	810	815
Leu Ile Thr Ala Pro	Val Thr Met Ile Leu	Ser Ser Gln Gln Asp Ala
820	825	830
Ala Phe Ala Phe Ala	Ser Leu Ala Ile Val	Phe Ser Ser Tyr Ile Thr
835	840	845
Leu Val Val Leu Phe	Val Pro Lys Met Arg	Arg Arg Leu Ile Thr Arg Gly
850	855	860
Glu Trp Gln Ser Glu	Ala Gln Asp Thr Met	Lys Thr Gly Ser Ser Thr
865	870	875
Asn Asn Asn Glu Glu	Lys Ser Arg Leu Leu	Glu Lys Glu Asn Arg
885	890	895
Glu Leu Glu Lys Ile	Ile Ala Glu Lys Glu	Glu Arg Val Ser Glu Leu
900	905	910
Arg His Gln Leu Gln	Ser Arg Gln Leu Arg	Ser Arg Arg His Pro
915	920	925
Pro Thr Pro Pro Glu	Pro Ser Gly Gly Leu	Pro Arg Gly Pro Pro Glu
930	935	940
Pro Pro Asp Arg Leu	Ser Cys Asp Gly Ser	Arg Val His Leu Leu Tyr
945	950	955
Lys		960

<210> 15
 <211> 281
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 15
 Met Ser Glu Tyr Gln Pro Ser Leu Phe Ala Leu Asn Pro Met Gly Phe
 1 5 10 15
 Ser Pro Leu Asp Gly Ser Lys Ser Thr Asn Glu Asn Val Ser Ala Ser
 20 25 30
 Thr Ser Thr Ala Lys Pro Met Val Gly Gln Leu Ile Phe Asp Lys Phe
 35 40 45
 Ile Lys Thr Glu Glu Asp Pro Ile Ile Lys Gln Asp Thr Pro Ser Asn
 50 55 60
 Leu Asp Phe Asp Phe Ala Leu Pro Gln Thr Ala Thr Ala Pro Asp Ala
 65 70 75 80

Lys	Thr	Val	Leu	Pro	Ile	Pro	Glu	Leu	Asp	Asp	Ala	Val	Val	Glu	Ser
				85					90					95	
Phe	Phe	Ser	Ser	Ser	Thr	Asp	Ser	Thr	Pro	Met	Phe	Glu	Tyr	Glu	Asn
			100					105					110		
Leu	Glu	Asp	Asn	Ser	Lys	Glu	Trp	Thr	Ser	Leu	Phe	Asp	Asn	Asp	Ile
		115					120					125			
Pro	Val	Thr	Thr	Asp	Asp	Val	Ser	Leu	Ala	Asp	Lys	Ala	Ile	Glu	Ser
	130					135					140				
Thr	Glu	Glu	Val	Ser	Leu	Val	Pro	Ser	Asn	Leu	Glu	Val	Ser	Thr	Thr
145					150					155					160
Ser	Phe	Leu	Pro	Thr	Pro	Val	Leu	Glu	Asp	Ala	Lys	Leu	Thr	Gln	Thr
				165					170					175	
Arg	Lys	Val	Lys	Lys	Pro	Asn	Ser	Val	Val	Lys	Lys	Ser	His	His	Val
			180					185					190		
Gly	Lys	Asp	Asp	Glu	Ser	Arg	Leu	Asp	His	Leu	Gly	Val	Val	Ala	Tyr
		195					200					205			
Asn	Arg	Lys	Gln	Arg	Ser	Ile	Pro	Leu	Ser	Pro	Ile	Val	Pro	Glu	Ser
	210					215					220				
Ser	Asp	Pro	Ala	Ala	Leu	Lys	Arg	Ala	Arg	Asn	Thr	Glu	Ala	Ala	Arg
225					230					235					240
Arg	Ser	Arg	Ala	Arg	Lys	Leu	Gln	Arg	Met	Lys	Gln	Leu	Glu	Asp	Lys
				245					250					255	
Val	Glu	Glu	Leu	Leu	Ser	Lys	Asn	Tyr	His	Leu	Glu	Asn	Glu	Val	Ala
			260					265					270		
Arg	Leu	Lys	Lys	Leu	Val	Gly	Glu	Arg							
		275					280								

<210> 16
 <211> 957
 <212> PRT
 <213> Homo sapiens

<400> 16

Met	Ala	Asp	Pro	Ala	Glu	Cys	Ser	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
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Pro	Leu	Asn	Glu	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	Lys
			20					25					30		
Phe	Lys	Gly	Asp	Glu	Thr	Val	Val	Ile	Gly	Gln	Gly	Lys	Pro	Tyr	Val
		35					40					45			
Phe	Asp	Arg	Val	Leu	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	Asn
	50					55				60					
Ala	Cys	Ala	Lys	Gln	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly
65				70					75					80	
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
				85				90					95		
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
			100					105					110		
Ala	His	Asp	Ile	Phe	Asp	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
		115					120				125				
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
	130					135					140				
Asp	Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys
145					150					155					160
Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
				165					170					175	
Pro	Glu	Glu	Val	Met	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ala	Asn	Arg	His
			180					185					190		
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile
		195					200					205			
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Lys	Lys	Leu
	210					215					220				
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser

225					230					235					240
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
				245					250					255	
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly
			260					265					270		
Thr	Lys	Thr	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu
		275					280					285			
Gln	Asp	Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys
	290					295					300				
Ser	Pro	Ser	Val	Phe	Asn	Glu	Ala	Glu	Thr	Lys	Ser	Thr	Leu	Met	Phe
305					310					315				320	
Gly	Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Ser	Val	Asn	Leu	Glu
				325					330					335	
Leu	Thr	Ala	Glu	Glu	Trp	Lys	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys
			340					345					350		
Asn	Lys	Thr	Leu	Lys	Asn	Val	Ile	Gln	His	Leu	Glu	Met	Glu	Leu	Asn
		355				360						365			
Arg	Trp	Arg	Asn	Gly	Glu	Ala	Val	Pro	Glu	Asp	Glu	Gln	Ile	Ser	Ala
	370				375						380				
Lys	Asp	Gln	Lys	Asn	Leu	Glu	Pro	Cys	Asp	Asn	Thr	Pro	Ile	Ile	Asp
385				390						395				400	
Asn	Ile	Ala	Pro	Val	Val	Ala	Gly	Ile	Ser	Thr	Glu	Glu	Lys	Glu	Lys
				405					410					415	
Tyr	Asp	Glu	Glu	Ile	Ser	Ser	Leu	Tyr	Arg	Gln	Leu	Asp	Asp	Lys	Asp
		420						425					430		
Asp	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Ala	Glu	Lys	Leu	Lys	Gln	Gln
		435					440					445			
Met	Leu	Asp	Gln	Asp	Glu	Leu	Leu	Ala	Ser	Thr	Arg	Arg	Asp	Tyr	Glu
	450					455					460				
Lys	Ile	Gln	Glu	Glu	Leu	Thr	Arg	Leu	Gln	Ile	Glu	Asn	Glu	Ala	Ala
465					470					475				480	
Lys	Asp	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Val
				485					490					495	
Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	Thr	Arg	Ala	Asn
			500					505					510		
Glu	Gln	Leu	Thr	Asp	Glu	Leu	Ala	Gln	Lys	Thr	Thr	Thr	Leu	Thr	Thr
		515					520					525			
Thr	Gln	Arg	Glu	Leu	Ser	Gln	Leu	Gln	Glu	Leu	Ser	Asn	His	Gln	Lys
	530					535					540				
Lys	Arg	Ala	Thr	Glu	Ile	Leu	Asn	Leu	Leu	Leu	Lys	Asp	Leu	Gly	Glu
545					550					555				560	
Ile	Gly	Gly	Ile	Ile	Gly	Thr	Asn	Asp	Val	Lys	Thr	Leu	Ala	Asp	Val
				565					570					575	
Asn	Gly	Val	Ile	Glu	Glu	Glu	Phe	Thr	Met	Ala	Arg	Leu	Tyr	Ile	Ser
			580					585					590		
Lys	Met	Lys	Ser	Glu	Val	Lys	Ser	Leu	Val	Asn	Arg	Ser	Lys	Gln	Leu
		595					600					605			
Glu	Ser	Ala	Gln	Met	Asp	Ser	Asn	Arg	Lys	Met	Asn	Ala	Ser	Glu	Arg
		610				615					620				
Glu	Leu	Ala	Ala	Cys	Gln	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Lys	Ile
625					630					635				640	
Lys	Ser	Leu	Thr	Asp	Tyr	Met	Gln	Asn	Met	Glu	Gln	Lys	Arg	Arg	Gln
				645					650					655	
Leu	Glu	Glu	Ser	Gln	Asp	Ser	Leu	Ser	Glu	Glu	Leu	Ala	Lys	Leu	Arg
			660					665					670		
Ala	Gln	Glu	Lys	Met	His	Glu	Val	Ser	Phe	Gln	Asp	Lys	Glu	Lys	Glu
		675					680					685			
His	Leu	Thr	Arg	Leu	Gln	Asp	Ala	Glu	Glu	Met	Lys	Lys	Ala	Leu	Glu
	690					695					700				
Gln	Gln	Met	Glu	Ser	His	Arg	Glu	Ala	His	Gln	Lys	Gln	Leu	Ser	Arg
705					710					715				720	
Leu	Arg	Asp	Glu	Ile	Glu	Glu	Lys	Gln	Lys	Ile	Ile	Asp	Glu	Ile	Arg

				725					730					735			
Asp	Leu	Asn	Gln	Lys	Leu	Gln	Leu	Glu	Gln	Glu	Lys	Leu	Ser	Ser	Asp		
			740					745					750				
Tyr	Asn	Lys	Leu	Lys	Ile	Glu	Asp	Gln	Glu	Arg	Glu	Met	Lys	Leu	Glu		
		755					760					765					
Lys	Leu	Leu	Leu	Leu	Asn	Asp	Lys	Arg	Glu	Gln	Ala	Arg	Glu	Asp	Leu		
	770					775					780						
Lys	Gly	Leu	Glu	Glu	Thr	Val	Ser	Arg	Glu	Leu	Gln	Thr	Leu	His	Asn		
	785				790					795					800		
Leu	Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Thr	Thr	Arg	Val	Lys	Lys	Ser		
				805					810						815		
Val	Glu	Leu	Asp	Asn	Asp	Asp	Gly	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln		
			820					825					830				
Lys	Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His		
		835					840					845					
Lys	Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys		
	850					855					860						
Leu	Glu	Lys	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu		
	865				870					875					880		
Ser	Ala	Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Met	Arg	Asp	Arg	Lys	Arg		
				885					890						895		
Tyr	Gln	Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ala	Lys	Asn		
			900					905					910				
Met	Ala	Arg	Arg	Ala	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro		
		915					920					925					
Gly	His	Tyr	Pro	Ala	Ser	Ser	Pro	Thr	Ala	Val	His	Ala	Ile	Arg	Gly		
	930					935					940						
Gly	Gly	Gly	Ser	Ser	Ser	Asn	Ser	Thr	His	Tyr	Gln	Lys					
	945				950					955							

<210> 17

<211> 956

<212> PRT

<213> Mus musculus

<400> 17

Met	Ala	Asp	Pro	Ala	Glu	Cys	Ser	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg		
1				5					10					15			
Pro	Leu	Asn	Glu	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	Lys		
			20					25					30				
Phe	Lys	Gly	Glu	Glu	Thr	Val	Val	Ile	Gly	Gln	Gly	Lys	Pro	Tyr	Val		
		35					40					45					
Phe	Asp	Arg	Val	Leu	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	Asn		
	50					55					60						
Ala	Cys	Ala	Lys	Gln	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly		
	65			70						75					80		
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met		
				85				90						95			
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile		
			100					105					110				
Ala	His	Asp	Ile	Phe	Asp	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu		
		115					120					125					
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg		
	130					135					140						
Asp	Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys		
	145				150					155					160		
Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser		
				165				170							175		
Pro	Glu	Glu	Val	Met	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ala	Asn	Arg	His		
			180					185					190				
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile		
		195					200						205				

Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Lys	Lys	Leu
	210					215					220				
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser
225					230					235					240
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
				245					250					255	
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly
			260					265					270		
Thr	Lys	Thr	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu
		275					280					285			
Gln	Asp	Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys
	290					295					300				
Ser	Pro	Ser	Val	Phe	Asn	Glu	Ala	Glu	Thr	Lys	Ser	Thr	Leu	Met	Phe
305				310						315					320
Gly	Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Ser	Val	Asn	Leu	Glu
				325					330					335	
Leu	Thr	Ala	Glu	Glu	Trp	Lys	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys
			340					345					350		
Asn	Lys	Ala	Leu	Lys	Ser	Val	Leu	Gln	His	Leu	Glu	Met	Glu	Leu	Asn
		355					360					365			
Arg	Trp	Arg	Asn	Gly	Glu	Ala	Val	Pro	Glu	Asp	Glu	Gln	Ile	Ser	Ala
	370					375					380				
Lys	Asp	His	Lys	Ser	Leu	Glu	Pro	Cys	Asp	Asn	Thr	Pro	Ile	Ile	Asp
385					390					395					400
Asn	Ile	Thr	Pro	Val	Val	Asp	Gly	Ile	Ser	Ala	Glu	Lys	Glu	Lys	Tyr
				405					410					415	
Asp	Glu	Glu	Ile	Thr	Ser	Leu	Tyr	Arg	Gln	Leu	Asp	Asp	Lys	Asp	Asp
			420					425					430		
Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Ala	Glu	Lys	Leu	Lys	Gln	Gln	Met
		435					440					445			
Leu	Asp	Gln	Asp	Glu	Leu	Leu	Ala	Ser	Thr	Arg	Arg	Asp	Tyr	Glu	Lys
	450					455					460				
Ile	Gln	Glu	Glu	Leu	Thr	Arg	Leu	Gln	Ile	Glu	Asn	Glu	Ala	Ala	Lys
465					470					475					480
Asp	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Val	Asn
				485				490						495	
Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	Thr	Arg	Ala	Asn	Glu
			500					505					510		
Gln	Leu	Thr	Asp	Glu	Leu	Ala	Gln	Lys	Thr	Thr	Thr	Leu	Thr	Thr	Thr
		515					520					525			
Gln	Arg	Glu	Leu	Ser	Gln	Leu	Gln	Glu	Leu	Ser	Asn	His	Gln	Lys	Lys
	530					535					540				
Arg	Ala	Thr	Glu	Ile	Leu	Asn	Leu	Leu	Leu	Lys	Asp	Leu	Gly	Glu	Ile
545					550					555					560
Gly	Gly	Ile	Ile	Gly	Thr	Asn	Asp	Val	Lys	Thr	Leu	Ala	Asp	Val	Asn
				565				570						575	
Gly	Val	Ile	Glu	Glu	Glu	Phe	Thr	Met	Ala	Arg	Leu	Tyr	Ile	Ser	Lys
			580				585					590			
Met	Lys	Ser	Glu	Val	Lys	Ser	Leu	Val	Asn	Arg	Ser	Lys	Gln	Leu	Glu
		595					600					605			
Ser	Ala	Gln	Met	Asp	Ser	Asn	Arg	Lys	Met	Asn	Ala	Ser	Glu	Arg	Glu
	610					615					620				
Leu	Ala	Ala	Cys	Gln	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Lys	Ile	Lys
625					630					635					640
Ser	Leu	Thr	Asp	Tyr	Met	Gln	Asn	Met	Glu	Gln	Lys	Arg	Arg	Gln	Leu
			645					650						655	
Glu	Glu	Ser	Gln	Asp	Ser	Leu	Ser	Glu	Glu	Leu	Ala	Lys	Leu	Arg	Ala
			660				665						670		
Gln	Glu	Lys	Met	His	Glu	Val	Ser	Phe	Gln	Asp	Lys	Glu	Lys	Glu	His
		675					680					685			
Leu	Thr	Arg	Leu	Gln	Asp	Ala	Glu	Glu	Val	Lys	Lys	Ala	Leu	Glu	Gln
	690					695					700				

Gln	Met	Glu	Ser	His	Arg	Glu	Ala	His	Gln	Lys	Gln	Leu	Ser	Arg	Leu
705					710					715					720
Arg	Asp	Glu	Ile	Glu	Glu	Lys	Gln	Arg	Ile	Ile	Asp	Glu	Ile	Arg	Asp
				725					730					735	
Leu	Asn	Gln	Lys	Leu	Gln	Leu	Glu	Gln	Glu	Arg	Leu	Ser	Ser	Asp	Tyr
			740					745					750		
Asn	Lys	Leu	Lys	Ile	Glu	Asp	Gln	Glu	Arg	Glu	Val	Lys	Leu	Glu	Lys
		755					760					765			
Leu	Leu	Leu	Leu	Asn	Asp	Lys	Arg	Glu	Gln	Ala	Arg	Glu	Asp	Leu	Lys
	770					775					780				
Gly	Leu	Glu	Glu	Thr	Val	Ser	Ile	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu
785					790					795					800
Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Thr	Thr	Arg	Val	Lys	Lys	Ser	Val
				805					810					815	
Glu	Leu	Asp	Ser	Asp	Asp	Gly	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln	Lys
			820					825					830		
Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys
		835					840					845			
Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu
	850					855					860				
Glu	Lys	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Ser
865					870					875					880
Ala	Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr
				885					890					895	
Gln	Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ala	Lys	Asn	Met
			900					905					910		
Ala	Arg	Arg	Ala	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly
		915					920					925			
His	Tyr	Pro	Ala	Ser	Ser	Pro	Thr	Ala	Val	His	Ala	Val	Arg	Gly	Gly
	930					935					940				
Gly	Gly	Gly	Ser	Ser	Asn	Ser	Thr	His	Tyr	Gln	Lys				
945					950					955					

<210> 18
 <211> 815
 <212> PRT
 <213> Caenorhabditis elegans

<400> 18															
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Arg	Ile	Arg	Pro	Leu	Asn	Lys	Thr	Glu	Glu	Lys	Asn	Ala	Asp	Arg	Phe
			20					25					30		
Leu	Pro	Lys	Phe	Pro	Ser	Glu	Asp	Ser	Ile	Ser	Leu	Gly	Gly	Lys	Val
		35					40					45			
Tyr	Val	Phe	Asp	Lys	Val	Phe	Lys	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val
	50					55					60				
Tyr	Lys	Gly	Ala	Ala	Tyr	His	Ile	Val	Gln	Asp	Val	Leu	Ser	Gly	Tyr
65					70					75					80
Asn	Gly	Thr	Val	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His
				85					90					95	
Thr	Met	Glu	Gly	Val	Ile	Gly	Asp	Asn	Gly	Leu	Ser	Gly	Ile	Ile	Pro
			100					105					110		
Arg	Ile	Val	Ala	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn
		115					120					125			
Leu	Gln	Phe	His	Ile	Lys	Val	Ser	Tyr	Tyr	Glu	Ile	Tyr	Asn	Glu	Lys
	130					135					140				
Ile	Arg	Asp	Leu	Leu	Asp	Pro	Glu	Lys	Val	Asn	Leu	Ser	Ile	His	Glu
145					150					155					160
Asp	Lys	Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Ala	Thr	Glu	Arg	Phe	Val
				165					170					175	
Gly	Gly	Pro	Asp	Glu	Val	Leu	Gln	Ala	Ile	Glu	Asp	Gly	Lys	Ser	Asn

		675					680					685							
Glu	Asp	Ser	Leu	Ser	Gly	Pro	Ala	Gln	Lys	Gln	Arg	Ile	Gln	Phe	Leu				
	690						695					700							
Glu	Asn	Asn	Leu	Asp	Lys	Leu	Thr	Lys	Val	His	Lys	Gln	Leu	Val	Arg				
705					710					715					720				
Asp	Asn	Ala	Asp	Leu	Arg	Val	Glu	Leu	Pro	Lys	Met	Glu	Ala	Arg	Leu				
				725					730					735					
Arg	Gly	Arg	Glu	Asp	Arg	Ile	Lys	Ile	Leu	Glu	Thr	Ala	Leu	Arg	Asp				
			740					745					750						
Ser	Lys	Gln	Arg	Ser	Gln	Ala	Glu	Arg	Lys	Lys	Tyr	Gln	Gln	Glu	Val				
		755					760					765							
Glu	Arg	Ile	Lys	Glu	Ala	Val	Arg	Gln	Arg	Asn	Met	Arg	Arg	Met	Asn				
	770					775					780								
Ala	Pro	Gln	Ile	Val	Lys	Pro	Ile	Arg	Pro	Gly	Gln	Val	Tyr	Thr	Ser				
785					790					795					800				
Pro	Ser	Ala	Gly	Met	Ser	Gln	Gly	Ala	Pro	Asn	Gly	Ser	Asn	Ala					
			805						810					815					

<210> 19
 <211> 975
 <212> PRT
 <213> Drosophila melanogaster

<400> 19

Met	Ser	Ala	Glu	Arg	Glu	Ile	Pro	Ala	Glu	Asp	Ser	Ile	Lys	Val	Val				
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Cys	Arg	Phe	Arg	Pro	Leu	Asn	Asp	Ser	Glu	Glu	Lys	Ala	Gly	Ser	Lys				
			20					25					30						
Phe	Val	Val	Lys	Phe	Pro	Asn	Asn	Val	Glu	Glu	Asn	Cys	Ile	Ser	Ile				
		35				40						45							
Ala	Gly	Lys	Val	Tyr	Leu	Phe	Asp	Lys	Val	Phe	Lys	Pro	Asn	Ala	Ser				
	50					55					60								
Gln	Glu	Lys	Val	Tyr	Asn	Glu	Ala	Ala	Lys	Ser	Ile	Val	Thr	Asp	Val				
65					70					75					80				
Leu	Ala	Gly	Tyr	Asn	Gly	Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser				
				85					90					95					
Gly	Lys	Thr	His	Thr	Met	Glu	Gly	Val	Ile	Gly	Asp	Ser	Val	Lys	Gln				
			100					105					110						
Gly	Ile	Ile	Pro	Arg	Ile	Val	Asn	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ala				
		115					120					125							
Met	Glu	Val	Asn	Leu	Glu	Phe	His	Ile	Lys	Val	Ser	Tyr	Tyr	Glu	Ile				
	130					135					140								
Tyr	Met	Asp	Lys	Ile	Arg	Asp	Leu	Leu	Asp	Val	Ser	Lys	Val	Asn	Leu				
145					150					155				160					
Ser	Val	His	Glu	Asp	Lys	Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Ala	Thr				
				165					170					175					
Glu	Arg	Phe	Val	Ser	Ser	Pro	Glu	Asp	Val	Phe	Glu	Val	Ile	Glu	Glu				
			180					185					190						
Gly	Lys	Ser	Asn	Arg	His	Ile	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser				
		195					200					205							
Ser	Arg	Ser	His	Ser	Val	Phe	Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Leu				
	210					215					220								
Glu	Asn	Gln	Lys	Lys	Leu	Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala				
225					230					235				240					
Gly	Ser	Glu	Lys	Val	Ser	Lys	Thr	Gly	Ala	Glu	Gly	Thr	Val	Leu	Asp				
			245						250					255					
Glu	Ala	Lys	Asn	Ile	Asn	Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile				
		260						265					270						
Ser	Ala	Leu	Ala	Asp	Gly	Asn	Lys	Thr	His	Ile	Pro	Tyr	Arg	Asp	Ser				
	275					280						285							
Lys	Leu	Thr	Arg	Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ala	Arg	Thr				
	290					295					300								

Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro	Ala	Ser	Phe	Asn	Glu	Ser	Glu	Thr
305					310					315					320
Lys	Ser	Thr	Leu	Asp	Phe	Gly	Arg	Arg	Ala	Lys	Thr	Val	Lys	Asn	Val
				325					330					335	
Val	Cys	Val	Asn	Glu	Glu	Leu	Thr	Ala	Glu	Glu	Trp	Lys	Arg	Arg	Tyr
			340					345					350		
Glu	Lys	Glu	Lys	Glu	Lys	Asn	Ala	Arg	Leu	Lys	Gly	Lys	Val	Glu	Lys
		355					360					365			
Leu	Glu	Ile	Glu	Leu	Ala	Arg	Trp	Arg	Ala	Gly	Glu	Thr	Val	Lys	Ala
	370					375					380				
Glu	Glu	Gln	Ile	Asn	Met	Glu	Asp	Leu	Met	Glu	Ala	Ser	Thr	Pro	Asn
385					390					395					400
Leu	Glu	Val	Glu	Ala	Ala	Gln	Thr	Ala	Ala	Ala	Glu	Ala	Ala	Leu	Ala
				405				410						415	
Ala	Gln	Arg	Thr	Ala	Leu	Ala	Asn	Met	Ser	Ala	Ser	Val	Ala	Val	Asn
			420					425					430		
Glu	Gln	Ala	Arg	Leu	Ala	Thr	Glu	Cys	Glu	Arg	Leu	Tyr	Gln	Gln	Leu
		435					440					445			
Asp	Asp	Lys	Asp	Glu	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Tyr	Ala	Glu	Gln
450						455					460				
Leu	Lys	Glu	Gln	Val	Met	Glu	Gln	Glu	Glu	Leu	Ile	Ala	Asn	Ala	Arg
465					470					475					480
Arg	Glu	Tyr	Glu	Thr	Leu	Gln	Ser	Glu	Met	Ala	Arg	Ile	Gln	Gln	Glu
				485				490						495	
Asn	Glu	Ser	Ala	Lys	Glu	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu
			500					505					510		
Glu	Leu	Ala	Val	Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Ile	Asp	Asn	Lys
		515					520					525			
Asn	Lys	Asp	Ile	Asp	Ala	Leu	Asn	Glu	Glu	Leu	Gln	Gln	Lys	Gln	Ser
	530					535					540				
Val	Phe	Asn	Ala	Ala	Ser	Thr	Glu	Leu	Gln	Gln	Leu	Lys	Asp	Met	Ser
545					550					555					560
Ser	His	Gln	Lys	Lys	Arg	Ile	Thr	Glu	Met	Leu	Thr	Asn	Leu	Leu	Arg
				565				570						575	
Asp	Leu	Gly	Glu	Val	Gly	Gln	Ala	Ile	Ala	Pro	Gly	Glu	Ser	Ser	Ile
			580				585					590			
Asp	Leu	Lys	Met	Ser	Ala	Leu	Ala	Gly	Thr	Asp	Ala	Ser	Lys	Val	Glu
		595					600					605			
Glu	Asp	Phe	Thr	Met	Ala	Arg	Leu	Phe	Ile	Ser	Lys	Met	Lys	Thr	Glu
	610					615					620				
Ala	Lys	Asn	Ile	Ala	Gln	Arg	Cys	Ser	Asn	Met	Glu	Thr	Gln	Gln	Ala
625					630					635					640
Asp	Ser	Asn	Lys	Lys	Ile	Ser	Glu	Tyr	Glu	Lys	Asp	Leu	Gly	Glu	Tyr
				645					650					655	
Arg	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Arg	Met	Lys	Ser	Leu	Gln	Glu
			660				665						670		
Ser	Met	Arg	Glu	Ala	Glu	Asn	Lys	Lys	Arg	Thr	Leu	Glu	Glu	Gln	Ile
		675					680					685			
Asp	Ser	Leu	Arg	Glu	Glu	Cys	Ala	Lys	Leu	Lys	Ala	Ala	Glu	His	Val
	690					695					700				
Ser	Ala	Val	Asn	Ala	Glu	Lys	Gln	Arg	Ala	Glu	Glu	Leu	Arg	Ser	
705					710					715					720
Met	Phe	Asp	Ser	Gln	Met	Asp	Glu	Leu	Arg	Glu	Ala	His	Thr	Arg	Gln
				725					730					735	
Val	Ser	Glu	Leu	Arg	Asp	Glu	Ile	Ala	Ala	Lys	Gln	His	Glu	Met	Asp
			740					745					750		
Glu	Met	Lys	Asp	Val	His	Gln	Lys	Leu	Leu	Leu	Ala	His	Gln	Gln	Met
		755					760					765			
Thr	Ala	Asp	Tyr	Glu	Lys	Val	Arg	Gln	Glu	Asp	Ala	Glu	Lys	Ser	Ser
	770					775					780				
Glu	Leu	Gln	Asn	Ile	Ile	Leu	Thr	Asn	Glu	Arg	Arg	Glu	Gln	Ala	Arg
785					790					795					800

Lys	Asp	Leu	Lys	Gly	Leu	Glu	Asp	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr
				805					810					815	
Leu	His	Asn	Leu	Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Gln	Gln	Arg	Ile
			820					825					830		
Arg	Lys	Asn	Val	Val	Asn	Glu	Glu	Ser	Glu	Glu	Asp	Gly	Gly	Ser	Leu
		835					840					845			
Ala	Gln	Lys	Gln	Lys	Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Asp	Gln	Leu
	850					855					860				
Thr	Lys	Val	His	Lys	Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys
865					870					875					880
Glu	Leu	Pro	Lys	Leu	Glu	Lys	Arg	Leu	Arg	Cys	Thr	Met	Glu	Arg	Val
				885					890					895	
Lys	Ala	Leu	Glu	Thr	Ala	Leu	Lys	Glu	Ala	Lys	Glu	Gly	Ala	Met	Arg
			900					905					910		
Asp	Arg	Lys	Arg	Tyr	Gln	Tyr	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val
		915					920					925			
Arg	Gln	Lys	His	Leu	Gly	Arg	Arg	Gly	Pro	Gln	Ala	Gln	Ile	Ala	Lys
	930				935						940				
Pro	Ile	Arg	Ser	Gly	Gln	Gly	Ala	Ile	Ala	Ile	Arg	Gly	Gly	Gly	Ala
945					950					955					960
Val	Gly	Gly	Pro	Ser	Pro	Leu	Ala	Gln	Val	Asn	Pro	Val	Asn	Ser	
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<210> 20
 <211> 963
 <212> PRT
 <213> Homo sapiens

<400> 20

Met	Ala	Asp	Leu	Ala	Glu	Cys	Asn	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
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Pro	Leu	Asn	Glu	Ser	Glu	Val	Asn	Arg	Gly	Asp	Lys	Tyr	Ile	Ala	Lys
			20					25					30		
Phe	Gln	Gly	Glu	Asp	Thr	Val	Val	Ile	Ala	Ser	Lys	Pro	Tyr	Ala	Phe
		35					40					45			
Asp	Arg	Val	Phe	Gln	Ser	Ser	Thr	Ser	Gln	Glu	Gln	Val	Tyr	Asn	Asp
	50					55					60				
Cys	Ala	Lys	Lys	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly	Thr
65					70					75				80	
Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	Glu
				85					90					95	
Gly	Lys	Leu	His	Asp	Pro	Glu	Gly	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val
			100					105					110		
Gln	Asp	Ile	Phe	Asn	Tyr	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu	Phe
		115					120					125			
His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	Asp
	130					135					140				
Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn
145					150					155					160
Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Cys	Ser	Pro
				165					170					175	
Asp	Glu	Val	Met	Asp	Thr	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His	Val
			180					185					190		
Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe
		195					200					205			
Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Thr	Gln	Thr	Glu	Gln	Lys	Leu	Ser
	210					215					220				
Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys
225					230					235					240
Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys
				245					250					255	
Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly	Ser

			260					265					270		
Thr	Tyr	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu	Gln	Asp
		275					280					285			
Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro
	290					295				300					
Ser	Ser	Tyr	Asn	Glu	Ser	Glu	Thr	Lys	Ser	Thr	Leu	Leu	Phe	Gly	Gln
305				310						315					320
Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Cys	Val	Asn	Val	Glu	Leu	Thr
			325					330					335		
Ala	Glu	Gln	Trp	Lys	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	Asn	Lys
		340					345					350			
Ile	Leu	Arg	Asn	Thr	Ile	Gln	Trp	Leu	Glu	Asn	Glu	Leu	Asn	Arg	Trp
	355					360						365			
Arg	Asn	Gly	Glu	Thr	Val	Pro	Ile	Asp	Glu	Gln	Phe	Asp	Lys	Glu	Lys
	370					375					380				
Ala	Asn	Leu	Glu	Ala	Phe	Thr	Val	Asp	Lys	Asp	Ile	Thr	Leu	Thr	Asn
385				390						395					400
Asp	Lys	Pro	Ala	Thr	Ala	Ile	Gly	Val	Ile	Gly	Asn	Phe	Thr	Asp	Ala
			405					410						415	
Glu	Arg	Arg	Lys	Cys	Glu	Glu	Glu	Ile	Ala	Lys	Leu	Tyr	Lys	Gln	Leu
			420				425					430			
Asp	Asp	Lys	Asp	Glu	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Val	Glu	Lys
	435					440						445			
Leu	Lys	Thr	Gln	Met	Leu	Asp	Gln	Glu	Glu	Leu	Leu	Ala	Ser	Thr	Arg
	450					455					460				
Arg	Asp	Gln	Asp	Asn	Met	Gln	Ala	Glu	Leu	Asn	Arg	Leu	Gln	Ala	Glu
465				470						475					480
Asn	Asp	Ala	Ser	Lys	Glu	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu
			485						490				495		
Glu	Leu	Ala	Val	Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys
		500					505						510		
Thr	Lys	Glu	Tyr	Glu	Leu	Leu	Ser	Asp	Glu	Leu	Asn	Gln	Lys	Ser	Ala
	515						520					525			
Thr	Leu	Ala	Ser	Ile	Asp	Ala	Glu	Leu	Gln	Lys	Leu	Lys	Glu	Met	Thr
	530				535						540				
Asn	His	Gln	Lys	Lys	Arg	Ala	Ala	Glu	Met	Met	Ala	Ser	Leu	Leu	Lys
545					550					555					560
Asp	Leu	Ala	Glu	Ile	Gly	Ile	Ala	Val	Gly	Asn	Asn	Asp	Val	Lys	Gln
			565						570					575	
Pro	Glu	Gly	Thr	Gly	Met	Ile	Asp	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu
		580					585					590			
Tyr	Ile	Ser	Lys	Met	Lys	Ser	Glu	Val	Lys	Thr	Met	Val	Lys	Arg	Cys
	595						600					605			
Lys	Gln	Leu	Glu	Ser	Thr	Gln	Thr	Glu	Ser	Asn	Lys	Lys	Met	Glu	Glu
	610														

		755					760				765				
Thr	Val	Met	Gln	Asp	Arg	Arg	Glu	Gln	Ala	Arg	Gln	Asp	Leu	Lys	Gly
	770					775					780				
Leu	Glu	Glu	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg
785					790					795					800
Lys	Leu	Phe	Val	Gln	Asp	Leu	Ala	Thr	Arg	Val	Lys	Lys	Ser	Ala	Glu
				805					810					815	
Ile	Asp	Ser	Asp	Thr	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln	Lys	Ile	
			820				825					830			
Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln
		835					840					845			
Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu	Glu
	850					855					860				
Lys	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Ser	Ala
865					870					875					880
Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Ser	Arg	Asp	Arg	Lys	Arg	Tyr	Gln
				885					890					895	
Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ser	Lys	Asn	Met	Ala
			900					905					910		
Arg	Arg	Gly	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly	Gln
		915					920					925			
His	Pro	Ala	Ala	Ser	Pro	Thr	His	Pro	Ser	Ala	Ile	Arg	Gly	Gly	Gly
	930					935					940				
Ala	Phe	Val	Gln	Asn	Ser	Gln	Pro	Val	Ala	Val	Arg	Gly	Gly	Gly	Gly
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Lys	Gln	Val													

<210> 21
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 <212> PRT
 <213> Loligo pealeii

<400> 21

Met	Asp	Val	Ala	Ser	Glu	Cys	Asn	Ile	Lys	Val	Ile	Cys	Arg	Val	Arg
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Pro	Leu	Asn	Glu	Ala	Glu	Glu	Arg	Ala	Gly	Ser	Lys	Phe	Ile	Leu	Lys
		20						25					30		
Phe	Pro	Thr	Asp	Asp	Ser	Ile	Ser	Ile	Ala	Gly	Lys	Val	Phe	Val	Phe
		35					40					45			
Asp	Lys	Val	Leu	Lys	Pro	Asn	Val	Ser	Gln	Glu	Tyr	Val	Tyr	Asn	Val
	50					55					60				
Gly	Ala	Lys	Pro	Ile	Val	Ala	Asp	Val	Leu	Ser	Gly	Cys	Asn	Gly	Thr
65					70					75					80
Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	Glu
				85					90					95	
Gly	Val	Leu	Asp	Lys	Pro	Ser	Met	His	Gly	Ile	Ile	Pro	Arg	Ile	Val
			100					105					110		
Gln	Asp	Ile	Phe	Asn	Tyr	Ile	Tyr	Gly	Met	Asp	Glu	Asn	Leu	Glu	Phe
	115						120					125			
His	Ile	Lys	Ile	Ser	Tyr	Tyr	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	Asp
	130					135					140				
Leu	Leu	Asp	Val	Thr	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys	Asn
145					150					155					160
Arg	Val	Pro	Phe	Val	Lys	Gly	Ala	Thr	Glu	Arg	Phe	Val	Ser	Ser	Pro
				165					170					175	
Glu	Glu	Val	Met	Glu	Val	Ile	Asp	Glu	Gly	Lys	Asn	Asn	Arg	His	Val
		180						185					190		
Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Val	Phe
	195					200						205			
Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Val	Glu	Thr	Gln	Lys	Lys	Leu	Ser
	210					215					220				

Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys
225					230					235					240
Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys
				245					250					255	
Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Asp	Gly	Asn
			260					265					270		
Lys	Ser	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Leu	Thr	Arg	Ile	Leu	Gln
		275					280					285			
Glu	Ser	Leu	Gly	Gly	Asn	Ala	Arg	Thr	Thr	Met	Val	Ile	Cys	Cys	Ser
	290					295					300				
Pro	Ala	Ser	Tyr	Asn	Glu	Ser	Glu	Thr	Lys	Ser	Thr	Leu	Leu	Phe	Gly
305					310					315					320
Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Val	Val	Ser	Val	Asn	Glu	Glu	Leu
				325					330					335	
Thr	Ala	Asp	Glu	Trp	Lys	Arg	Arg	Tyr	Glu	Lys	Glu	Lys	Glu	Arg	Val
			340					345					350		
Thr	Lys	Leu	Lys	Ala	Thr	Met	Ala	Lys	Leu	Glu	Ala	Glu	Leu	Gln	Arg
		355					360					365			
Trp	Arg	Thr	Gly	Gln	Ala	Val	Ser	Val	Glu	Glu	Gln	Val	Asp	Leu	Lys
	370					375					380				
Glu	Asp	Val	Pro	Ala	Glu	Ser	Pro	Ala	Thr	Ser	Thr	Thr	Ser	Leu	Ala
385					390					395					400
Gly	Gly	Leu	Ile	Ala	Ser	Met	Asn	Glu	Gly	Asp	Arg	Thr	Gln	Leu	Glu
				405					410					415	
Glu	Glu	Arg	Leu	Lys	Leu	Tyr	Gln	Gln	Leu	Asp	Asp	Lys	Asp	Asp	Glu
			420					425					430		
Ile	Asn	Asn	Gln	Ser	Gln	Leu	Ile	Glu	Lys	Leu	Lys	Glu	Gln	Met	Met
		435					440					445			
Glu	Gln	Glu	Asp	Leu	Ile	Ala	Gln	Ser	Arg	Arg	Asp	Tyr	Glu	Asn	Leu
		450				455					460				
Gln	Gln	Asp	Met	Ser	Arg	Ile	Gln	Ala	Asp	Asn	Glu	Ser	Ala	Lys	Asp
465					470					475					480
Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Met	Asn	Tyr
				485					490					495	
Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	Asn	Lys	Glu	Asn	Glu	Asn
			500					505					510		
Leu	Ser	Glu	Glu	Leu	Asn	Gln	Lys	Leu	Ser	Thr	Leu	Asn	Ser	Leu	Gln
		515					520					525			
Asn	Glu	Leu	Asp	Gln	Leu	Lys	Asp	Ser	Ser	Met	His	His	Arg	Lys	Arg
		530				535					540				
Val	Thr	Asp	Met	Met	Ile	Asn	Leu	Leu	Lys	Asp	Leu	Gly	Asp	Ile	Gly
545					550					555					560
Thr	Ile	Val	Gly	Gly	Asn	Ala	Ala	Glu	Thr	Lys	Pro	Thr	Ala	Gly	Ser
				565					570					575	
Gly	Glu	Lys	Ile	Glu	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu	Tyr	Ile	Ser
			580					585					590		
Lys	Met	Lys	Ser	Glu	Val	Lys	Thr	Leu	Val	Ser	Arg	Asn	Asn	Gln	Leu
			595				600					605			
Glu	Asn	Thr	Gln	Gln	Asp	Asn	Phe	Lys	Lys	Ile	Glu	Thr	His	Glu	Lys
		610				615					620				
Asp	Leu	Ser	Asn	Cys	Lys	Leu	Leu	Ile	Gln	Gln	His	Glu	Ala	Lys	Met
625					630					635					640
Ala	Ser	Leu	Gln	Glu	Ala	Ile	Lys	Asp	Ser	Glu	Asn	Lys	Lys	Arg	Met
				645					650					655	
Leu	Glu	Asp	Asn	Val	Asp	Ser	Leu	Asn	Glu	Glu	Tyr	Ala	Lys	Leu	Lys
			660					665					670		
Ala	Gln	Glu	Gln	Met	His	Leu	Ala	Ala	Leu	Ser	Glu	Arg	Glu	Lys	Glu
			675				680					685			
Thr	Ser	Gln	Ala	Ser	Glu	Thr	Arg	Glu	Val	Leu	Glu	Lys	Gln	Met	Glu
			690			695					700				
Met	His	Arg	Glu	Gln	His	Gln	Lys	Gln	Leu	Gln	Ser	Leu	Arg	Asp	Glu
705					710					715					720

Ile	Ser	Glu	Lys	Gln	Ala	Thr	Val	Asp	Asn	Leu	Lys	Asp	Asp	Asn	Gln	
				725					730					735		
Arg	Leu	Ser	Leu	Ala	Leu	Glu	Lys	Leu	Gln	Ala	Asp	Tyr	Asp	Lys	Leu	
			740					745					750			
Lys	Gln	Glu	Glu	Val	Glu	Lys	Ala	Ala	Lys	Leu	Ala	Asp	Leu	Ser	Leu	
		755					760					765				
Gln	Ile	Asp	Arg	Arg	Glu	Gln	Ala	Lys	Gln	Asp	Leu	Lys	Gly	Leu	Glu	
	770					775					780					
Glu	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	Lys	Leu	
785					790					795					800	
Phe	Val	Gln	Asp	Leu	Gln	Asn	Lys	Val	Lys	Lys	Ser	Cys	Ser	Lys	Thr	
			805					810						815		
Glu	Glu	Glu	Asp	Glu	Asp	Thr	Gly	Gly	Asn	Ala	Ala	Gln	Lys	Gln	Lys	
			820					825					830			
Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	
	835						840					845				
Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu	
	850				855						860					
Glu	Lys	Arg	Leu	Arg	Ala	Thr	Met	Glu	Arg	Val	Lys	Ser	Leu	Glu	Ser	
865					870					875					880	
Ala	Leu	Lys	Asp	Ala	Lys	Glu	Gly	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr	
			885					890						895		
Gln	His	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Gln	Lys	Asn	Leu	
			900					905					910			
Ala	Arg	Arg	Gly	His	Ala	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly	
	915						920					925				
Gln	His	Gln	Ser	Val	Ser	Pro	Ala	Gln	Ala	Ala	Ala	Ile	Arg	Gly	Gly	
	930					935					940					
Gly	Gly	Leu	Ser	Gln	Asn	Gly	Pro	Met	Ile	Thr	Ser	Thr	Pro	Ile	Arg	
945					950					955					960	
Met	Ala	Pro	Glu	Ser	Lys	Ala										
				965												

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 <211> 963
 <212> PRT
 <213> Mus musculus

<400> 22																
Met	Ala	Asp	Pro	Ala	Glu	Cys	Asn	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg	
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Pro	Leu	Asn	Glu	Ser	Glu	Val	Asn	Arg	Gly	Asp	Lys	Tyr	Val	Ala	Lys	
		20					25						30			
Phe	Gln	Gly	Glu	Asp	Thr	Val	Val	Ile	Ala	Ser	Lys	Pro	Tyr	Ala	Phe	
	35					40						45				
Asp	Arg	Val	Phe	Gln	Ser	Ser	Thr	Ser	Gln	Glu	Gln	Val	Tyr	Asn	Asp	
	50				55						60					
Cys	Ala	Lys	Lys	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly	Thr	
65				70						75					80	
Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	Glu	
				85					90					95		
Gly	Lys	Leu	His	Asp	Pro	Glu	Gly	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val	
		100						105					110			
Gln	Asp	Ile	Phe	Asn	Tyr	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu	Phe	
	115					120						125				
His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	Asp	
	130					135					140					
Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn	
145					150					155					160	
Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Cys	Ser	Pro	
			165					170						175		
Asp	Glu	Val	Met	Asp	Thr	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His	Val	

				180					185					190			
Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe		
		195					200					205					
Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Thr	Gln	Thr	Glu	Gln	Lys	Leu	Ser		
	210					215					220						
Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys		
225					230					235					240		
Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys		
				245					250					255			
Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly	Ser		
			260					265					270				
Thr	Tyr	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu	Gln	Asp		
	275						280					285					
Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro		
	290					295					300						
Ser	Ser	Tyr	Asn	Glu	Ser	Glu	Thr	Lys	Ser	Thr	Leu	Leu	Phe	Gly	Gln		
305					310					315					320		
Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Cys	Val	Asn	Val	Glu	Leu	Thr		
				325					330					335			
Ala	Glu	Gln	Trp	Lys	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	Asn	Lys		
			340					345						350			
Thr	Leu	Arg	Asn	Thr	Ile	Gln	Trp	Leu	Glu	Asn	Glu	Leu	Asn	Arg	Trp		
	355						360					365					
Arg	Asn	Gly	Glu	Thr	Val	Pro	Ile	Asp	Glu	Gln	Phe	Asp	Lys	Glu	Lys		
	370					375					380						
Ala	Asn	Leu	Glu	Ala	Phe	Thr	Ala	Asp	Lys	Asp	Ile	Ala	Ile	Thr	Ser		
385					390					395					400		
Asp	Lys	Gly	Ala	Ala	Val	Gly	Met	Ala	Gly	Ser	Phe	Thr	Asp	Ala			
				405				410						415			
Glu	Arg	Arg	Lys	Cys	Glu	Glu	Glu	Leu	Ala	Lys	Leu	Tyr	Lys	Gln	Leu		
			420					425					430				
Asp	Asp	Lys	Asp	Glu	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Val	Glu	Lys		
	435						440					445					
Leu	Lys	Thr	Gln	Met	Leu	Asp	Gln	Glu	Glu	Leu	Leu	Ala	Ser	Thr	Arg		
	450					455					460						
Arg	Asp	Gln	Asp	Asn	Met	Gln	Ala	Glu	Leu	Asn	Arg	Leu	Gln	Ala	Glu		
465					470					475					480		
Asn	Asp	Ala	Ser	Lys	Glu	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu		
				485					490						495		
Glu	Leu	Ala	Val	Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys		
			500					505					510				
Thr	Lys	Glu	Tyr	Glu	Leu	Leu	Thr	Asp	Glu	Phe	Asn	Gln	Lys	Ser	Ala		
	515						520					525					
Thr	Leu	Ala	Ser	Ile	Asp	Ala	Glu	Leu	Gln	Lys	Leu	Lys	Glu	Met	Thr		
	530					535					540						
Asn	His	Gln	Lys	Lys	Arg	Ala	Ala	Glu	Met	Met	Ala	Ser	Leu	Leu	Lys		
545					550					555					560		
Asp	Leu	Ala	Glu	Ile	Gly	Ile	Ala	Val	Gly	Asn	Asn	Asp	Val	Lys	Gln		
				565					570						575		
Pro	Glu	Gly	Thr	Gly	Met	Ile	Asp	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu		
			580					585					590				
Tyr	Ile	Ser	Lys	Met	Lys	Ser	Glu	Val	Lys	Thr	Met	Val	Lys	Arg	Cys		
	595						600					605					
Lys	Gln	Leu	Glu	Ser	Thr	Gln	Thr	Glu	Ser	Asn	Lys	Lys	Met	Glu	Glu		
	610					615					620						
Asn	Glu	Lys	Glu	Leu	Ala	Ala	Cys	Gln	Leu	Arg	Ile	Ser	Gln	His	Glu		
625					630					635					640		
Ala	Lys	Ile	Lys	Ser	Leu	Thr	Glu	Tyr	Leu	Gln	Asn	Asp	Glu	Gln	Lys		
				645					650					655			
Lys	Arg	Gln	Leu	Glu	Glu	Ser	Leu	Asp	Ser	Leu	Gly	Glu	Glu	Leu	Val		
			660					665					670				
Gln	Leu	Arg	Ala	Gln	Glu	Lys	Val	His	Glu	Met	Glu	Lys	Glu	His	Leu		

Asn	Lys	Val	Gln	Thr	Ala	Asn	Glu	Val	Lys	Gln	Ala	Val	Glu	Gln	Gln
690						695					700				
Ile	Gln	Ser	His	Arg	Glu	Thr	His	Gln	Lys	Gln	Ile	Ser	Ser	Leu	Arg
705					710					715					720
Asp	Glu	Val	Glu	Ala	Lys	Glu	Lys	Leu	Ile	Thr	Asp	Leu	Gln	Asp	Gln
				725					730					735	
Asn	Gln	Lys	Met	Val	Leu	Glu	Thr	Glu	Arg	Leu	Arg	Val	Glu	His	Glu
			740					745					750		
Arg	Leu	Lys	Ala	Thr	Asp	Gln	Glu	Lys	Ser	Arg	Lys	Leu	His	Glu	Leu
		755				760						765			
Thr	Val	Met	Gln	Asp	Arg	Arg	Glu	Gln	Ala	Arg	Gln	Asp	Leu	Lys	Gly
770						775					780				
Leu	Glu	Glu	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg
785					790					795					800
Lys	Leu	Phe	Val	Gln	Asp	Leu	Ala	Thr	Arg	Val	Lys	Lys	Ser	Ala	Glu
				805					810					815	
Val	Asp	Ser	Asp	Asp	Thr	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln	Lys	Ile
			820					825					830		
Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln
		835					840					845			
Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu	Glu
		850				855					860				
Phe	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Ser	Ala
865					870					875					880
Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Ser	Arg	Asp	Arg	Lys	Arg	Tyr	Gln
				885					890					895	
Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ser	Lys	Asn	Met	Ala
			900					905					910		
Arg	Arg	Gly	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly	Gln
		915					920					925			
His	Pro	Ala	Ala	Ser	Pro	Thr	His	Pro	Gly	Thr	Val	Arg	Gly	Gly	Gly
		930				935					940				
Ser	Phe	Val	Gln	Asn	Asn	Gln	Pro	Val	Gly	Leu	Arg	Gly	Gly	Gly	Gly
945					950					955					960
Lys	Gln	Ser													

<210> 23
 <211> 928
 <212> PRT
 <213> Neurospora crassa

<400> 23

Met	Ser	Ser	Ser	Ala	Asn	Ser	Ile	Lys	Val	Val	Ala	Arg	Phe	Arg	Pro
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Gln	Asn	Arg	Val	Glu	Ile	Glu	Ser	Gly	Gly	Gln	Pro	Ile	Val	Thr	Phe
			20					25					30		
Gln	Gly	Pro	Asp	Thr	Cys	Thr	Val	Asp	Ser	Lys	Glu	Ala	Gln	Gly	Ser
		35					40					45			
Phe	Thr	Phe	Asp	Arg	Val	Phe	Asp	Met	Ser	Cys	Lys	Gln	Ser	Asp	Ile
		50				55					60				
Phe	Asp	Phe	Ser	Ile	Lys	Pro	Thr	Val	Asp	Asp	Ile	Leu	Asn	Gly	Tyr
65					70					75					80
Asn	Gly	Thr	Val	Phe	Ala	Tyr	Gly	Gln	Thr	Gly	Ala	Gly	Lys	Ser	Tyr
				85					90					95	
Thr	Met	Met	Gly	Thr	Ser	Ile	Asp	Asp	Pro	Asp	Gly	Arg	Gly	Val	Ile
			100					105					110		
Pro	Arg	Ile	Val	Glu	Gln	Ile	Phe	Thr	Ser	Ile	Leu	Ser	Ser	Ala	Ala
			115				120						125		
Asn	Ile	Glu	Tyr	Thr	Val	Arg	Val	Ser	Tyr	Met	Glu	Ile	Tyr	Met	Glu
		130				135					140				

Arg	Ile	Arg	Asp	Leu	Leu	Ala	Pro	Gln	Asn	Asp	Asn	Leu	Pro	Val	His
145					150					155					160
Glu	Glu	Lys	Asn	Arg	Gly	Val	Tyr	Val	Lys	Gly	Leu	Leu	Glu	Ile	Tyr
				165					170					175	
Val	Ser	Ser	Val	Gln	Glu	Val	Tyr	Glu	Val	Met	Arg	Arg	Gly	Gly	Asn
			180					185					190		
Ala	Arg	Ala	Val	Ala	Ala	Thr	Asn	Met	Asn	Gln	Glu	Ser	Ser	Arg	Ser
		195					200					205			
His	Ser	Ile	Phe	Val	Ile	Thr	Ile	Thr	Gln	Lys	Asn	Val	Glu	Thr	Gly
	210					215					220				
Ser	Ala	Lys	Ser	Gly	Gln	Leu	Phe	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu
225					230					235					240
Lys	Val	Gly	Lys	Thr	Gly	Ala	Ser	Gly	Gln	Thr	Leu	Glu	Glu	Ala	Lys
				245					250					255	
Lys	Ile	Asn	Lys	Ser	Leu	Ser	Ala	Leu	Gly	Met	Val	Ile	Asn	Ala	Leu
		260						265					270		
Thr	Asp	Gly	Lys	Ser	Ser	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Leu	Thr
	275						280					285			
Arg	Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ser	Arg	Thr	Thr	Leu	Ile
	290					295					300				
Ile	Asn	Cys	Ser	Pro	Ser	Ser	Tyr	Asn	Asp	Ala	Glu	Thr	Leu	Ser	Thr
305					310					315					320
Leu	Arg	Phe	Gly	Met	Arg	Ala	Lys	Ser	Ile	Lys	Asn	Lys	Ala	Lys	Val
				325					330					335	
Asn	Ala	Glu	Leu	Ser	Pro	Ala	Glu	Leu	Lys	Gln	Met	Leu	Ala	Lys	Ala
			340					345					350		
Lys	Thr	Gln	Ile	Thr	Ser	Phe	Glu	Asn	Tyr	Ile	Val	Asn	Leu	Glu	Ser
	355						360					365			
Glu	Val	Gln	Val	Trp	Arg	Gly	Gly	Glu	Thr	Val	Pro	Lys	Glu	Lys	Trp
	370					375					380				
Val	Pro	Pro	Leu	Glu	Leu	Ala	Ile	Thr	Pro	Ser	Lys	Ser	Ala	Ser	Thr
385					390					395					400
Thr	Ala	Arg	Pro	Ser	Thr	Pro	Ser	Arg	Leu	Leu	Pro	Glu	Ser	Arg	Ala
				405					410					415	
Glu	Thr	Pro	Ala	Ile	Ser	Asp	Arg	Ala	Gly	Thr	Pro	Ser	Leu	Pro	Leu
			420					425					430		
Asp	Lys	Asp	Glu	Arg	Glu	Glu	Phe	Leu	Arg	Arg	Glu	Asn	Glu	Leu	Gln
		435					440					445			
Asp	Gln	Ile	Ala	Glu	Lys	Glu	Ser	Ile	Ala	Ala	Ala	Ala	Glu	Arg	Gln
	450					455					460				
Leu	Arg	Glu	Thr	Lys	Glu	Glu	Leu	Ile	Ala	Leu	Lys	Asp	His	Asp	Ser
465					470					475					480
Lys	Leu	Gly	Lys	Glu	Asn	Glu	Arg	Leu	Ile	Ser	Glu	Ser	Asn	Glu	Phe
				485					490					495	
Lys	Met	Gln	Leu	Glu	Arg	Leu	Ala	Phe	Glu	Asn	Lys	Glu	Ala	Gln	Ile
			500					505					510		
Thr	Ile	Asp	Gly	Leu	Lys	Asp	Ala	Asn	Ser	Glu	Leu	Thr	Ala	Glu	Leu
	515						520					525			
Asp	Glu	Val	Lys	Gln	Gln	Met	Leu	Asp	Met	Lys	Met	Ser	Ala	Lys	Glu
	530					535					540				
Thr	Ser	Ala	Val	Leu	Asp	Glu	Lys	Glu	Lys	Lys	Lys	Ala	Glu	Lys	Met
545					550					555					560
Ala	Lys	Met	Met	Ala	Gly	Phe	Asp	Leu	Ser	Gly	Asp	Val	Phe	Ser	Asp
				565				570						575	
Asn	Glu	Arg	Ala	Val	Ala	Asp	Ala	Ile	Ala	Gln	Leu	Asp	Ala	Leu	Phe
			580					585					590		
Glu	Ile	Ser	Ser	Ala	Gly	Asp	Ala	Ile	Pro	Pro	Glu	Asp	Ile	Lys	Ala
		595					600					605			
Leu	Arg	Glu	Lys	Leu	Val	Glu	Thr	Gln	Gly	Phe	Val	Arg	Gln	Ala	Glu
	610					615					620				
Leu	Ser	Ser	Phe	Ser	Ala	Ala	Ser	Ser	Asp	Ala	Glu	Ala	Arg	Lys	Arg
625					630					635					640

Ala	Glu	Leu	Glu	Ala	Arg	Leu	Glu	Ala	Leu	Gln	Gln	Glu	His	Glu	Glu
				645					650					655	
Leu	Leu	Ser	Arg	Asn	Leu	Thr	Glu	Ala	Asp	Lys	Glu	Glu	Val	Lys	Ala
			660					665					670		
Leu	Leu	Ala	Lys	Ser	Leu	Ser	Asp	Lys	Ser	Ala	Val	Gln	Val	Glu	Leu
		675					680					685			
Val	Glu	Gln	Leu	Lys	Ala	Asp	Ile	Ala	Leu	Lys	Asn	Ser	Glu	Thr	Glu
	690					695					700				
His	Leu	Lys	Ala	Leu	Val	Asp	Asp	Leu	Gln	Arg	Arg	Val	Lys	Ala	Gly
705					710					715					720
Gly	Ala	Gly	Val	Ala	Met	Ala	Asn	Gly	Lys	Thr	Val	Gln	Gln	Gln	Leu
				725					730					735	
Ala	Glu	Phe	Asp	Val	Met	Lys	Lys	Ser	Leu	Met	Arg	Asp	Leu	Gln	Asn
			740					745					750		
Arg	Cys	Glu	Arg	Val	Val	Glu	Leu	Glu	Ile	Ser	Leu	Asp	Glu	Thr	Arg
		755					760					765			
Glu	Gln	Tyr	Asn	Asn	Val	Leu	Arg	Ser	Ser	Asn	Asn	Arg	Ala	Gln	Gln
		770				775					780				
Lys	Lys	Met	Ala	Phe	Leu	Glu	Arg	Asn	Leu	Glu	Gln	Leu	Thr	Gln	Val
785					790					795					800
Gln	Arg	Gln	Leu	Val	Glu	Gln	Asn	Ser	Ala	Leu	Lys	Lys	Glu	Val	Ala
				805					810					815	
Ile	Ala	Glu	Arg	Lys	Leu	Met	Ala	Arg	Asn	Glu	Arg	Ile	Gln	Ser	Leu
			820				825						830		
Glu	Ser	Leu	Leu	Gln	Glu	Ser	Gln	Glu	Lys	Met	Ala	Gln	Ala	Asn	His
		835					840					845			
Lys	Phe	Glu	Val	Gln	Leu	Ala	Ala	Val	Lys	Asp	Arg	Leu	Glu	Ala	Ala
	850					855				860					
Lys	Ala	Gly	Ser	Thr	Arg	Gly	Leu	Gly	Thr	Asp	Ala	Gly	Leu	Gly	Gly
865					870					875					880
Phe	Ser	Ile	Gly	Ser	Arg	Ile	Ala	Lys	Pro	Leu	Arg	Gly	Gly	Gly	Asp
				885					890					895	
Ala	Val	Ala	Gly	Ala	Thr	Ala	Thr	Asn	Pro	Thr	Ile	Ala	Thr	Leu	Gln
			900					905					910		
Gln	Asn	Pro	Pro	Glu	Asn	Lys	Arg	Ser	Ser	Trp	Phe	Phe	Gln	Lys	Ser
		915					920					925			

<210> 24
 <211> 1031
 <212> PRT
 <213> Strongylocentrotus purpuratus

<400> 24

Met	Ala	Asp	Pro	Ala	Glu	Cys	Asn	Ile	Lys	Val	Val	Cys	Arg	Val	Arg
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Pro	Met	Asn	Ala	Thr	Glu	Gln	Asn	Thr	Ser	His	Ile	Cys	Thr	Lys	Phe
			20					25					30		
Ile	Ser	Glu	Glu	Gln	Val	Gln	Ile	Gly	Gly	Lys	Leu	Asn	Met	Phe	Asp
		35					40					45			
Arg	Ile	Phe	Lys	Pro	Asn	Thr	Thr	Gln	Glu	Glu	Val	Tyr	Asn	Lys	Ala
	50					55					60				
Ala	Arg	Gln	Ile	Val	Lys	Asp	Val	Leu	Asp	Gly	Tyr	Asn	Gly	Thr	Ile
65					70					75					80
Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	Phe	Thr	Met	Glu	Gly
				85					90				95		
Val	Met	Gly	Asn	Pro	Gln	Tyr	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val	Gln
			100					105					110		
Asp	Ile	Phe	Asn	His	Ile	Tyr	Gln	Met	Asp	Glu	Ser	Leu	Glu	Phe	His
		115					120					125			
Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Met	Asp	Arg	Ile	Arg	Asp	Leu
	130					135					140				
Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn	Arg

145					150					155					160
Val	Pro	Phe	Val	Lys 165	Gly	Ala	Thr	Glu	Arg 170	Phe	Ala	Ser	Ser	Pro 175	Glu
Glu	Val	Met	Asp 180	Val	Ile	Glu	Glu	Gly 185	Lys	Ser	Asn	Arg	His 190	Ile	Ala
Val	Thr	Asn 195	Met	Asn	Glu	His	Ser 200	Ser	Arg	Ser	His	Ser 205	Ile	Phe	Leu
Ile	Gln 210	Val	Lys	Gln	Glu	Asn 215	Met	Glu	Thr	Lys	Lys 220	Lys	Leu	Ser	Gly
Lys 225	Leu	Tyr	Leu	Val	Asp 230	Leu	Ala	Gly	Ser	Glu 235	Lys	Val	Ser	Lys	Thr 240
Gly	Ala	Glu	Gly	Thr 245	Val	Leu	Asp	Glu	Ala 250	Lys	Asn	Ile	Asn	Lys 255	Ser
Leu	Ser	Ala	Leu 260	Gly	Asn	Val	Ile	Ser 265	Ala	Leu	Ala	Asp	Gly 270	Lys	Lys
Ser	His 275	Ile	Pro	Tyr	Arg	Asp	Ser 280	Lys	Met	Thr	Arg	Ile 285	Leu	Gln	Glu
Ser	Leu 290	Gly	Gly	Asn	Ala	Arg 295	Thr	Thr	Ile	Val	Ile 300	Cys	Cys	Ser	Pro
Ser 305	Ser	Phe	Asn	Glu	Ser 310	Glu	Ser	Lys	Ser	Thr 315	Leu	Met	Phe	Gly	Gln 320
Arg	Ala	Lys	Thr	Ile 325	Lys	Asn	Thr	Val	Thr 330	Val	Asn	Met	Glu	Leu 335	Thr
Ala	Glu	Glu	Trp 340	Arg	Asn	Arg	Tyr	Glu 345	Lys	Glu	Lys	Glu	Lys 350	Asn	Gly
Arg	Leu	Lys 355	Ala	Gln	Leu	Leu	Ile 360	Leu	Glu	Asn	Glu	Leu 365	Gln	Arg	Trp
Arg	Ala 370	Gly	Glu	Ser	Val	Pro 375	Val	Lys	Glu	Gln	Gly 380	Asn	Lys	Asn	Asp
Glu 385	Ile	Leu	Lys	Glu	Met 390	Met	Lys	Pro	Lys	Gln 395	Met	Thr	Val	His	Val 400
Ser	Glu	Glu	Glu	Lys 405	Asn	Lys	Trp	Glu	Glu 410	Glu	Lys	Val	Lys	Leu 415	Tyr
Glu	Gln	Leu	Asp 420	Glu	Lys	Asp	Ser	Glu 425	Ile	Asp	Asn	Gln	Ser 430	Arg	Leu
Thr	Glu	Lys 435	Leu	Lys	Gln	Gln	Met 440	Leu	Glu	Gln	Glu	Glu 445	Leu	Leu	Ser
Ser	Met 450	Gln	Arg	Asp	Tyr	Glu 455	Leu	Leu	Gln	Ser	Gln 460	Met	Gly	Arg	Leu
Glu 465	Ala	Glu	Asn	Ala	Ala 470	Ala	Lys	Glu	Glu	Ala 475	Lys	Glu	Val	Leu	Gln 480
Ala	Leu	Glu	Glu	Met 485	Ala	Val	Asn	Tyr	Asp 490	Glu	Lys	Ser	Lys	Glu 495	Val
Glu	Asp	Lys	Asn 500	Arg	Met	Asn	Glu	Thr 505	Leu	Ser	Glu	Glu	Val 510	Asn	Glu
Lys	Met 515	Thr	Ala	Leu	His	Thr	Thr 520	Ser	Thr	Glu	Leu	Gln 525	Lys	Leu	Gln
Glu	Leu 530	Glu	Gln	His	Gln	Arg 535	Arg	Arg	Ile	Thr	Glu 540	Met	Met	Ala	Ser
Leu 545	Leu	Lys	Asp	Leu	Gly 550	Glu	Ile	Gly	Thr	Ala 555	Leu	Gly	Gly	Asn	Ala 560
Ala	Asp	Met	Lys	Pro 565	Asn	Val	Glu	Asn	Ile 570	Glu	Lys	Val	Asp	Glu 575	Glu
Phe	Thr	Met	Ala 580	Arg	Leu	Phe	Val	Ser 585	Lys	Met	Lys	Thr	Glu 590	Val	Lys
Thr	Met	Ser 595	Gln	Arg	Cys	Lys	Ile 600	Leu	Glu	Ala	Ser	Asn 605	Ala	Glu	Asn
Glu	Thr 610	Lys	Ile	Arg	Thr	Ser 615	Glu	Asp	Glu	Leu	Asp 620	Ser	Cys	Arg	Met
Thr 625	Ile	Gln	Gln	His	Glu 630	Ala	Lys	Met	Lys	Ser 635	Leu	Ser	Glu	Asn	Ile 640
Arg	Glu	Thr	Glu	Gly	Lys	Lys	Arg	His	Leu	Glu	Asp	Ser	Leu	Asp	Met

Leu	Asn	Glu	Glu	645	Val	Lys	Leu	Arg	650	Ala	Ala	Glu	Glu	Ile	655	Arg	Leu
			660	Ile				665						670			
Thr	Asp	Gln	Glu	Asp	Lys	Lys	Arg	Glu	Glu	Glu	Asp	Lys	Met	Gln	Ser		
		675					680					685					
Ala	Thr	Glu	Met	Gln	Ala	Ser	Met	Ser	Glu	Gln	Met	Glu	Ser	His	Arg		
	690					695					700						
Asp	Ala	His	Gln	Lys	Gln	Leu	Ala	Asn	Leu	Arg	Thr	Glu	Ile	Asn	Glu		
705					710					715					720		
Lys	Glu	His	Gln	Met	Glu	Glu	Leu	Lys	Asp	Val	Asn	Gln	Arg	Met	Thr		
				725					730					735			
Leu	Gln	His	Glu	Lys	Leu	Gln	Leu	Asp	Tyr	Glu	Lys	Leu	Lys	Ile	Glu		
			740					745					750				
Glu	Ala	Glu	Lys	Ala	Ala	Lys	Leu	Arg	Glu	Leu	Ser	Gln	Gln	Phe	Asp		
		755					760					765					
Arg	Arg	Glu	Gln	Ala	Lys	Gln	Asp	Leu	Lys	Gly	Leu	Glu	Glu	Thr	Val		
	770					775					780						
Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	Lys	Leu	Phe	Val	Ser		
785					790				795						800		
Asp	Leu	Gln	Asn	Arg	Val	Lys	Lys	Ala	Leu	Glu	Gly	Gly	Asp	Arg	Asp		
			805						810					815			
Asp	Asp	Ser	Gly	Gly	Ser	Gln	Ala	Gln	Lys	Gln	Lys	Ile	Ser	Phe	Leu		
		820						825					830				
Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln	Leu	Val	Arg		
		835					840					845					
Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu	Glu	Arg	Arg	Leu		
	850					855					860						
Arg	Ala	Thr	Ser	Glu	Arg	Val	Lys	Ala	Leu	Glu	Met	Ser	Leu	Lys	Glu		
865					870					875					880		
Thr	Lys	Glu	Gly	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr	Gln	Gln	Glu	Val		
			885					890						895			
Asp	Arg	Ile	Arg	Glu	Ala	Val	Arg	Gln	Arg	Asn	Phe	Ala	Lys	Arg	Gly		
		900						905					910				
Ser	Ser	Ala	Gln	Ile	Ala	Lys	Ala	Ile	Arg	Ala	Gly	His	Pro	Pro	Pro		
		915					920					925					
Ser	Pro	Gly	Gly	Ser	Thr	Gly	Ile	Arg	Gly	Gly	Gly	Tyr	Ser	Gly	Ile		
	930					935					940						
Arg	Gly	Gly	Gly	Ser	Pro	Val	Ile	Arg	Pro	Pro	Ser	His	Gly	Ser	Pro		
945					950					955					960		
Glu	Pro	Ile	Ser	His	Asn	Asn	Ser	Phe	Glu	Lys	Ser	Leu	Asn	Pro	Asn		
			965						970					975			
Asp	Ala	Glu	Asn	Met	Glu	Lys	Lys	Ala	Asn	Lys	Arg	Leu	Pro	Lys	Leu		
		980						985					990				
Pro	Pro	Gly	Asn	Lys	Leu	Thr	Glu	Ser	Asp	Ile	Ala	Ala	Met	Lys			
		995				1000					1005						
Ala	Arg	Ser	Lys	Ala	Arg	Asn	Asn	Thr	Pro	Gly	Lys	Ala	Pro	Leu	Thr		
	1010					1015					1020						
Thr	Ser	Gly	Glu	Gln	Gly	Ser											
1025					1030												

<210> 25

<211> 935

<212> PRT

<213> Syncephalastrum racemosum

<400> 25

Met	Ser	Gly	Asn	Asn	Ile	Lys	Val	Val	Cys	Arg	Phe	Arg	Pro	Gln	Asn
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Ser	Leu	Glu	Ile	Arg	Glu	Gly	Gly	Thr	Pro	Ile	Ile	Asp	Ile	Asp	Pro
		20						25				30			
Glu	Gly	Thr	Gln	Leu	Glu	Leu	Lys	Gly	Lys	Glu	Phe	Lys	Gly	Asn	Phe
		35					40					45			

Asn	Phe	Asp	Lys	Val	Phe	Gly	Met	Asn	Thr	Ala	Gln	Lys	Asp	Val	Phe
50						55					60				
Asp	Tyr	Ser	Ile	Lys	Thr	Ile	Val	Asp	Asp	Val	Thr	Ala	Gly	Tyr	Asn
65					70					75					80
Gly	Thr	Val	Phe	Ala	Tyr	Gly	Gln	Thr	Gly	Ser	Gly	Lys	Thr	Phe	Thr
			85						90					95	
Met	Met	Gly	Ala	Asp	Ile	Asp	Asp	Glu	Lys	Thr	Lys	Gly	Ile	Ile	Pro
			100					105					110		
Arg	Ile	Val	Glu	Gln	Ile	Phe	Asp	Ser	Ile	Met	Ala	Ser	Pro	Ser	Asn
		115					120					125			
Leu	Glu	Phe	Thr	Val	Lys	Val	Ser	Tyr	Met	Glu	Ile	Tyr	Met	Glu	Lys
	130					135					140				
Val	Arg	Asp	Leu	Leu	Asn	Pro	Ser	Ser	Glu	Asn	Leu	Pro	Ile	His	Glu
145					150					155					160
Asp	Lys	Thr	Lys	Gly	Val	Tyr	Val	Lys	Gly	Leu	Leu	Glu	Val	Tyr	Val
			165						170					175	
Gly	Ser	Thr	Asp	Glu	Val	Tyr	Glu	Val	Met	Arg	Arg	Gly	Ser	Asn	Asn
			180					185					190		
Arg	Val	Val	Ala	Tyr	Thr	Asn	Met	Asn	Ala	Glu	Ser	Ser	Arg	Ser	His
		195					200					205			
Ser	Ile	Val	Met	Phe	Thr	Ile	Thr	Gln	Lys	Asn	Val	Asp	Thr	Gly	Ala
	210					215					220				
Ala	Lys	Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys
225					230					235					240
Val	Gly	Lys	Thr	Gly	Ala	Ser	Gly	Gln	Thr	Leu	Glu	Glu	Ala	Lys	Lys
			245						250					255	
Ile	Asn	Lys	Ser	Leu	Thr	Ala	Leu	Gly	Met	Val	Ile	Asn	Ala	Leu	Thr
		260						265					270		
Asp	Gly	Lys	Ser	Ser	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Leu	Thr	Arg
		275					280					285			
Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ser	Arg	Thr	Thr	Leu	Ile	Ile
	290					295				300					
Asn	Cys	Ser	Pro	Ser	Ser	Tyr	Asn	Glu	Ala	Glu	Thr	Leu	Ser	Thr	Leu
305					310					315					320
Arg	Phe	Gly	Ala	Arg	Ala	Lys	Ser	Ile	Lys	Asn	Lys	Ala	Lys	Val	Asn
			325						330					335	
Ala	Asp	Leu	Ser	Pro	Ala	Glu	Leu	Lys	Ala	Leu	Leu	Lys	Lys	Val	Lys
			340					345					350		
Ser	Glu	Ala	Val	Thr	Tyr	Gln	Thr	Tyr	Ile	Ala	Ala	Leu	Glu	Gly	Glu
		355					360					365			
Val	Asn	Val	Trp	Arg	Thr	Gly	Gly	Thr	Val	Pro	Glu	Gly	Lys	Trp	Val
	370					375					380				
Thr	Met	Asp	Lys	Val	Ser	Lys	Gly	Asp	Phe	Ala	Gly	Leu	Pro	Pro	Ala
385					390					395					400
Pro	Gly	Phe	Lys	Ser	Pro	Val	Ser	Asp	Glu	Gly	Ser	Arg	Pro	Ala	Thr
			405						410					415	
Pro	Val	Pro	Thr	Leu	Glu	Lys	Asp	Glu	Arg	Glu	Glu	Phe	Ile	Lys	Arg
			420					425					430		
Glu	Asn	Glu	Leu	Met	Asp	Gln	Ile	Ser	Glu	Lys	Glu	Thr	Glu	Leu	Thr
		435					440					445			
Asn	Arg	Glu	Lys	Leu	Leu	Glu	Ser	Leu	Arg	Glu	Glu	Met	Gly	Tyr	Tyr
	450					455					460				
Lys	Glu	Gln	Glu	Gln	Ser	Val	Thr	Lys	Glu	Asn	Gln	Gln	Met	Thr	Ser
465					470					475					480
Glu	Leu	Ser	Glu	Leu	Arg	Leu	Gln	Leu	Gln	Lys	Val	Ser	Tyr	Glu	Ser
				485					490					495	
Lys	Glu	Asn	Ala	Ile	Thr	Val	Asp	Ser	Leu	Lys	Glu	Ala	Asn	Gln	Asp
			500					505					510		
Leu	Met	Ala	Glu	Leu	Glu	Glu	Leu	Lys	Lys	Asn	Leu	Ser	Glu	Met	Arg
		515					520					525			
Gln	Ala	His	Lys	Asp	Ala	Thr	Asp	Ser	Asp	Lys	Glu	Lys	Arg	Lys	Ala
	530					535					540				

Glu	Lys	Met	Ala	Gln	Met	Met	Ser	Gly	Phe	Asp	Pro	Ser	Gly	Ile	Leu
545					550					555					560
Asn	Asp	Lys	Glu	Arg	Gln	Ile	Arg	Asn	Ala	Leu	Ser	Lys	Leu	Asp	Gly
				565					570					575	
Glu	Gln	Gln	Gln	Thr	Leu	Thr	Val	Glu	Asp	Leu	Val	Ser	Leu	Arg	Arg
			580					585					590		
Glu	Leu	Ala	Glu	Ser	Lys	Met	Leu	Val	Glu	Gln	His	Thr	Lys	Thr	Ile
	595						600				605				
Ser	Asp	Leu	Ser	Ala	Asp	Lys	Asp	Ala	Met	Glu	Ala	Lys	Lys	Ile	Glu
	610					615					620				
Leu	Glu	Gly	Arg	Leu	Gly	Ala	Leu	Glu	Lys	Glu	Tyr	Glu	Glu	Leu	Leu
625					630					635					640
Asp	Lys	Thr	Ile	Ala	Glu	Glu	Glu	Ala	Asn	Met	Gln	Asn	Ala	Asp	Val
				645					650					655	
Asp	Asn	Leu	Ser	Ala	Leu	Lys	Thr	Lys	Leu	Glu	Ala	Gln	Tyr	Ala	Glu
			660					665					670		
Lys	Lys	Glu	Val	Gln	Gln	Lys	Glu	Ile	Asp	Asp	Leu	Lys	Arg	Glu	Leu
	675						680					685			
Asp	Arg	Lys	Gln	Ser	Gly	His	Glu	Lys	Leu	Ser	Ala	Ala	Met	Thr	Asp
	690					695					700				
Leu	Arg	Ala	Ala	Asn	Asp	Gln	Leu	Gln	Ala	Ala	Leu	Ser	Glu	Gln	Pro
705					710					715					720
Phe	Gln	Ala	Pro	Gln	Asp	Asn	Ser	Asp	Met	Thr	Glu	Lys	Glu	Lys	Asp
				725					730					735	
Ile	Glu	Arg	Thr	Arg	Lys	Ser	Met	Ala	Gln	Gln	Leu	Ala	Asp	Phe	Glu
			740					745					750		
Val	Met	Lys	Lys	Ala	Leu	Met	Arg	Asp	Leu	Gln	Asn	Arg	Cys	Glu	Lys
	755						760					765			
Val	Val	Glu	Leu	Glu	Met	Ser	Leu	Asp	Glu	Thr	Arg	Glu	Gln	Tyr	Asn
	770					775					780				
Asn	Val	Leu	Arg	Ala	Ser	Asn	Asn	Lys	Ala	Gln	Gln	Lys	Lys	Met	Ala
785					790					795					800
Phe	Leu	Glu	Arg	Asn	Leu	Glu	Gln	Leu	Thr	Asn	Val	Gln	Lys	Gln	Leu
				805					810					815	
Val	Glu	Gln	Asn	Ala	Ser	Leu	Lys	Lys	Glu	Val	Ala	Leu	Ala	Glu	Arg
			820					825					830		
Lys	Leu	Ile	Ala	Arg	Asn	Glu	Arg	Ile	Gln	Ser	Leu	Glu	Thr	Leu	Leu
	835						840					845			
His	Asn	Ala	Gln	Asp	Lys	Leu	Leu	Asn	Gln	Asn	Lys	Lys	Phe	Glu	Gln
	850					855					860				
Gln	Leu	Ala	Thr	Val	Arg	Glu	Arg	Leu	Glu	Gln	Ala	Arg	Ser	Gln	Lys
865					870					875					880
Ser	Gln	Asn	Ser	Leu	Ala	Ala	Leu	Asn	Phe	Ser	Arg	Ile	Ala	Lys	Pro
				885					890					895	
Leu	Arg	Gly	Asn	Gly	Ala	Ala	Ile	Asp	Asn	Gly	Ser	Asp	Asp	Gly	Ser
			900					905					910		
Leu	Pro	Thr	Ser	Pro	Thr	Asp	Lys	Arg	Asp	Lys	Arg	Ser	Ser	Trp	Met
	915						920					925			
Pro	Gly	Phe	Met	Asn	Ser	Arg									
	930					935									

<210> 26
 <211> 1032
 <212> PRT
 <213> Homo sapiens

<400> 26
 Met Ala Glu Thr Asn Asn Glu Cys Ser Ile Lys Val Leu Cys Arg Phe
 1 5 10 15
 Arg Pro Leu Asn Gln Ala Glu Ile Leu Arg Gly Asp Lys Phe Ile Pro
 20 25 30
 Ile Phe Gln Gly Asp Asp Ser Val Val Ile Gly Gly Lys Pro Tyr Val

530		535		540
Lys Arg Ile Ala Glu Val	Leu Asn Gly Leu Met	Lys Asp Leu Ser Glu		
545	550	555	560	
Phe Ser Val Ile Val	Gly Asn Gly Glu Ile	Lys Leu Pro Val Glu Ile		
	565	570	575	
Ser Gly Ala Ile Glu Glu Glu Phe Thr	Val Ala Arg Leu Tyr Ile Ser			
	580	585	590	
Lys Ile Lys Ser Glu Val Lys Ser Val	Val Lys Arg Cys Arg Gln Leu			
	595	600	605	
Glu Asn Leu Gln Val Glu Cys His Arg	Lys Met Glu Val Thr Gly Arg			
	610	615	620	
Glu Leu Ser Ser Cys Gln Leu Leu Ile	Ser Gln His Glu Ala Lys Ile			
	625	630	635	640
Arg Ser Leu Thr Glu Tyr Met Gln Ser	Val Glu Leu Lys Lys Arg His			
	645	650	655	
Leu Glu Glu Ser Tyr Asp Ser Leu Ser	Asp Glu Leu Ala Lys Leu Gln			
	660	665	670	
Ala Gln Glu Thr Val His Glu Val Ala	Leu Lys Asp Lys Glu Pro Asp			
	675	680	685	
Thr Gln Asp Ala Asp Glu Val Lys Lys	Ala Leu Glu Leu Gln Met Glu			
	690	695	700	
Ser His Arg Glu Ala His His Arg Gln	Leu Ala Arg Leu Arg Asp Glu			
	705	710	715	720
Ile Asn Glu Lys Gln Lys Thr Ile Asp	Glu Leu Lys Asp Leu Asn Gln			
	725	730	735	
Lys Leu Gln Leu Glu Leu Glu Lys Leu	Gln Ala Asp Tyr Glu Lys Leu			
	740	745	750	
Lys Ser Glu Glu His Glu Lys Ser Thr	Lys Leu Gln Glu Leu Thr Phe			
	755	760	765	
Leu Tyr Glu Arg His Glu Gln Ser Lys	Gln Asp Leu Lys Gly Leu Glu			
	770	775	780	
Glu Thr Val Ala Arg Glu Leu Gln Thr	Leu His Asn Leu Arg Lys Leu			
	785	790	795	800
Phe Val Gln Asp Val Thr Thr Arg Val	Lys Lys Ser Ala Glu Met Glu			
	805	810	815	
Pro Glu Asp Ser Gly Gly Ile His Ser	Gln Lys Gln Lys Ile Ser Phe			
	820	825	830	
Leu Glu Asn Asn Leu Glu Gln Leu Thr	Lys Val His Lys Gln Leu Val			
	835	840	845	
Arg Asp Asn Ala Asp Leu Arg Cys Glu	Leu Pro Lys Leu Glu Lys Arg			
	850	855	860	
Leu Arg Ala Thr Ala Glu Arg Val Lys	Ala Leu Glu Gly Ala Leu Lys			
	865	870	875	880
Glu Ala Lys Glu Gly Ala Met Lys Asp	Lys Arg Arg Tyr Gln Gln Glu			
	885	890	895	
Val Asp Arg Ile Lys Glu Ala Val Arg	Tyr Lys Ser Ser Gly Lys Arg			
	900	905	910	
Ala His Ser Ala Gln Ile Ala Lys Pro	Val Arg Pro Gly His Tyr Pro			
	915	920	925	
Ala Ser Ser Pro Thr Asn Pro Tyr Gly	Thr Arg Ser Pro Glu Cys Ile			
	930	935	940	
Ser Tyr Thr Asn Ser Leu Phe Gln Asn	Tyr Gln Asn Leu Tyr Leu Gln			
	945	950	955	960
Ala Thr Pro Ser Ser Thr Ser Asp Met	Tyr Phe Ala Asn Ser Cys Thr			
	965	970	975	
Ser Ser Gly Ala Thr Ser Ser Gly Gly	Pro Leu Ala Ser Tyr Gln Lys			
	980	985	990	
Ala Asn Met Asp Asn Gly Asn Ala Thr	Asp Ile Asn Asp Asn Arg Ser			
	995	1000	1005	
Asp Leu Pro Cys Gly Tyr Glu Ala Glu	Asp Gln Ala Lys Leu Phe Pro			
	1010	1015	1020	
Leu His Gln Glu Thr Ala Ala Ser				

1025

1030

<210> 27

<211> 1027

<212> PRT

<213> Mus musculus

<400> 27

Met	Ala	Glu	Thr	Asn	Asn	Glu	Cys	Ser	Ile	Lys	Val	Leu	Cys	Arg	Phe	
1				5					10					15		
Arg	Pro	Leu	Asn	Gln	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	
			20					25					30			
Ile	Phe	Gln	Gly	Asp	Asp	Ser	Val	Ile	Ile	Gly	Gly	Lys	Pro	Tyr	Val	
	35					40						45				
Phe	Asp	Arg	Val	Phe	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	His	
50						55					60					
Ala	Cys	Ala	Met	Gln	Ile	Val	Lys	Asp	Val	Leu	Ala	Gly	Tyr	Asn	Gly	
65					70					75					80	
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	
				85				90						95		
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile	
			100					105					110			
Ala	Arg	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu	
		115					120					125				
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	
	130					135					140					
Asp	Leu	Leu	Asp	Val	Thr	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	
145					150					155					160	
Asn	Arg	Val	Pro	Phe	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser	
				165				170						175		
Pro	Glu	Glu	Ile	Leu	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His	
			180					185					190			
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	
		195					200					205				
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Gln	Lys	Leu	
	210					215				220						
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	
225					230					235					240	
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	
			245					250						255		
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly	
			260				265						270			
Thr	Lys	Ser	Tyr	Val	Pro	Tyr	Arg	Asp	Thr	Lys	Met	Thr	Arg	Ile	Leu	
		275					280					285				
Gln	Asp	Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Met	Phe	Ile	Cys	Cys	
	290					295					300					
Ser	Pro	Ser	Ser	Tyr	Asn	Asp	Ala	Glu	Thr	Lys	Ser	Thr	Leu	Met	Phe	
305					310					315					320	
Gly	Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Ala	Ser	Val	Asn	Leu	Glu	
				325					330					335		
Leu	Thr	Ala	Glu	Gln	Trp	Lys	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	
			340					345					350			
Thr	Lys	Ala	Gln	Lys	Glu	Thr	Ile	Ala	Asn	Val	Glu	Ala	Glu	Leu	Ser	
		355					360					365				
Arg	Trp	Arg	Asn	Gly	Glu	Asn	Val	Pro	Glu	Thr	Glu	Arg	Leu	Ala	Gly	
	370					375					380					
Glu	Asp	Ser	Ala	Leu	Gly	Ala	Glu	Leu	Cys	Glu	Thr	Pro	Val	Asn		
385					390					395				400		
Asp	Asn	Ser	Ser	Ile	Val	Val	Arg	Ile	Ala	Pro	Glu	Glu	Arg	Gln	Lys	
				405					410					415		
Tyr	Glu	Glu	Glu	Ile	Arg	Arg	Leu	Tyr	Lys	Gln	Leu	Asp	Asp	Lys	Asp	
			420					425					430			

Asp	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Ile	Glu	Lys	Leu	Lys	Gln	Gln		
		435					440					445					
Met	Leu	Asp	Gln	Glu	Glu	Leu	Leu	Val	Ser	Thr	Arg	Gly	Asp	Asn	Glu		
	450					455					460						
Lys	Val	Gln	Arg	Glu	Leu	Ser	His	Leu	Gln	Ser	Glu	Asn	Asp	Ala	Ala		
465					470					475					480		
Lys	Asp	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Val		
				485					490					495			
Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Glu	Lys	Ser	Gln	Gln	Asn		
			500					505					510				
Gln	Leu	Leu	Val	Asp	Glu	Leu	Ser	Gln	Lys	Val	Ala	Thr	Met	Leu	Ser		
		515					520					525					
Leu	Glu	Ser	Glu	Leu	Gln	Arg	Leu	Gln	Glu	Val	Ser	Gly	His	Gln	Arg		
	530					535					540						
Lys	Arg	Ile	Ala	Glu	Val	Leu	Asn	Gly	Leu	Met	Arg	Asp	Leu	Ser	Glu		
545					550					555					560		
Phe	Ser	Val	Ile	Val	Gly	Asn	Gly	Glu	Ile	Lys	Leu	Pro	Val	Glu	Ile		
				565					570					575			
Ser	Gly	Ala	Ile	Glu	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu	Tyr	Ile	Ser		
			580					585					590				
Lys	Ile	Lys	Ser	Glu	Val	Lys	Ser	Val	Val	Lys	Arg	Cys	Arg	Gln	Leu		
		595					600					605					
Glu	Asn	Leu	Gln	Val	Glu	Cys	His	Arg	Lys	Met	Glu	Val	Thr	Gly	Arg		
	610					615				620							
Glu	Leu	Ser	Ser	Cys	Gln	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Lys	Ile		
625					630					635					640		
Arg	Ser	Leu	Thr	Glu	Tyr	Met	Gln	Thr	Val	Glu	Leu	Lys	Lys	Arg	His		
				645					650					655			
Leu	Glu	Glu	Ser	Tyr	Asp	Ser	Leu	Ser	Asp	Glu	Leu	Ala	Arg	Leu	Gln		
			660					665					670				
Ala	His	Glu	Thr	Val	His	Glu	Val	Ala	Leu	Lys	Asp	Lys	Glu	Pro	Asp		
		675					680					685					
Thr	Gln	Asp	Ala	Glu	Glu	Val	Lys	Lys	Ala	Leu	Glu	Leu	Gln	Met	Glu		
	690					695					700						
Asn	His	Arg	Glu	Ala	His	His	Arg	Gln	Leu	Ala	Arg	Leu	Arg	Asp	Glu		
705					710					715					720		
Ile	Asn	Glu	Lys	Gln	Lys	Thr	Ile	Asp	Glu	Leu	Lys	Asp	Leu	Asn	Gln		
				725					730					735			
Lys	Leu	Gln	Leu	Glu	Leu	Glu	Lys	Leu	Gln	Ala	Asp	Tyr	Glu	Arg	Leu		
		740						745					750				
Lys	Asn	Glu	Glu	Asn	Glu	Lys	Ser	Ala	Lys	Leu	Gln	Glu	Leu	Thr	Phe		
		755					760					765					
Leu	Tyr	Glu	Arg	His	Glu	Gln	Ser	Lys	Gln	Asp	Leu	Lys	Gly	Leu	Glu		
	770					775					780						
Glu	Thr	Val	Ala	Arg	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	Lys	Leu		
785					790					795					800		
Phe	Val	Gln	Asp	Val	Thr	Thr	Arg	Val	Lys	Lys	Ser	Ala	Glu	Met	Glu		
				805					810					815			
Pro	Glu	Asp	Ser	Gly	Gly	Ile	His	Ser	Gln	Lys	Gln	Lys	Ile	Ser	Phe		
			820					825					830				
Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln	Leu	Val		
		835					840					845					
Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu	Glu	Lys	Arg		
	850					855					860						
Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Gly	Ala	Leu	Lys		
865					870					875					880		
Glu	Ala	Lys	Glu	Gly	Ala	Met	Lys	Asp	Lys	Arg	Arg	Tyr	Gln	Gln	Glu		
				885					890					895			
Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Tyr	Lys	Ser	Ser	Gly	Lys	Arg		
			900					905					910				
Gly	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Val	Arg	Pro	Gly	His	Tyr	Pro		
		915					920					925					

Ala Ser Ser Pro Thr Asn Pro Tyr Gly Thr Arg Ser Pro Glu Cys Ile
930 935 940
Ser Tyr Thr Asn Asn Leu Phe Gln Asn Tyr Gln Asn Leu His Leu Gln
945 950 955 960
Ala Ala Pro Ser Ser Thr Ser Asp Met Tyr Phe Ala Ser Ser Gly Arg
965 970 975
Thr Ser Val Ala Pro Leu Ala Ser Tyr Gln Lys Ala Asn Met Asp Asn
980 985 990
Gly Asn Ala Thr Asp Ile Asn Asp Asn Arg Ser Asp Leu Pro Cys Gly
995 1000 1005
Tyr Glu Ala Glu Asp Gln Ala Lys Leu Phe Pro Leu His Gln Glu Thr
1010 1015 1020
Ala Ala Ser
1025

<210> 28

<211> 1111

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 28

Met Ala Arg Ser Ser Leu Pro Asn Arg Arg Thr Ala Gln Phe Glu Ala
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Asn Lys Arg Arg Thr Ile Ala His Ala Pro Ser Pro Ser Leu Ser Asn
20 25 30
Gly Met His Thr Leu Thr Pro Pro Thr Cys Asn Asn Gly Ala Ala Thr
35 40 45
Ser Asp Ser Asn Ile His Val Tyr Val Arg Cys Arg Ser Arg Asn Lys
50 55 60
Arg Glu Ile Glu Glu Lys Ser Ser Val Val Ile Ser Thr Leu Gly Pro
65 70 75 80
Gln Gly Lys Glu Ile Ile Leu Ser Asn Gly Ser His Gln Ser Tyr Ser
85 90 95
Ser Ser Lys Lys Thr Tyr Gln Phe Asp Gln Val Phe Gly Ala Glu Ser
100 105 110
Asp Gln Glu Thr Val Phe Asn Ala Thr Ala Lys Asn Tyr Ile Lys Glu
115 120 125
Met Leu His Gly Tyr Asn Cys Thr Ile Phe Ala Tyr Gly Gln Thr Gly
130 135 140
Thr Gly Lys Thr Tyr Thr Met Ser Gly Asp Ile Asn Ile Leu Gly Asp
145 150 155 160
Val Gln Ser Thr Asp Asn Leu Leu Leu Gly Glu His Ala Gly Ile Ile
165 170 175
Pro Arg Val Leu Val Asp Leu Phe Lys Glu Leu Ser Ser Leu Asn Lys
180 185 190
Glu Tyr Ser Val Lys Ile Ser Phe Leu Glu Leu Tyr Asn Glu Asn Leu
195 200 205
Lys Asp Leu Leu Ser Asp Ser Glu Asp Asp Asp Pro Ala Val Asn Asp
210 215 220
Pro Lys Arg Gln Ile Arg Ile Phe Asp Asn Asn Asn Asn Ser Ser
225 230 235 240
Ile Met Val Lys Gly Met Gln Glu Ile Phe Ile Asn Ser Ala His Glu
245 250 255
Gly Leu Asn Leu Leu Met Gln Gly Ser Leu Lys Arg Lys Val Ala Ala
260 265 270
Thr Lys Cys Asn Asp Leu Ser Ser Arg Ser His Thr Val Phe Thr Ile
275 280 285
Thr Thr Asn Ile Val Glu Gln Asp Ser Lys Asp His Gly Gln Asn Lys
290 295 300
Asn Phe Val Lys Ile Gly Lys Leu Asn Leu Val Asp Leu Ala Gly Ser
305 310 315 320
Glu Asn Ile Asn Arg Ser Gly Ala Glu Asn Lys Arg Ala Gln Glu Ala

				325					330				335				
Gly	Leu	Ile	Asn	Lys	Ser	Leu	Leu	Thr	Leu	Gly	Arg	Val	Ile	Asn	Ala		
			340					345					350				
Leu	Val	Asp	His	Ser	Asn	His	Ile	Pro	Tyr	Arg	Glu	Ser	Lys	Leu	Thr		
		355					360					365					
Arg	Leu	Leu	Gln	Asp	Ser	Leu	Gly	Gly	Met	Thr	Lys	Thr	Cys	Ile	Ile		
	370					375					380						
Ala	Thr	Ile	Ser	Pro	Ala	Lys	Ile	Ser	Met	Glu	Thr	Ala	Ser	Thr			
	385				390					395				400			
Leu	Glu	Tyr	Ala	Thr	Arg	Ala	Lys	Ser	Ile	Lys	Asn	Thr	Pro	Gln	Val		
			405						410					415			
Asn	Gln	Ser	Leu	Ser	Lys	Asp	Thr	Cys	Leu	Lys	Asp	Tyr	Ile	Gln	Glu		
		420					425						430				
Ile	Glu	Lys	Leu	Arg	Asn	Asp	Leu	Lys	Asn	Ser	Arg	Asn	Lys	Gln	Gly		
	435						440					445					
Ile	Phe	Ile	Thr	Gln	Asp	Gln	Leu	Asp	Leu	Tyr	Glu	Ser	Asn	Ser	Ile		
	450					455					460						
Leu	Ile	Asp	Glu	Gln	Asn	Leu	Lys	Ile	His	Asn	Leu	Arg	Glu	Gln	Ile		
	465				470					475				480			
Lys	Lys	Phe	Lys	Glu	Asn	Tyr	Leu	Asn	Gln	Leu	Asp	Ile	Asn	Asn	Leu		
			485						490					495			
Leu	Gln	Ser	Glu	Lys	Glu	Lys	Leu	Ile	Ala	Ile	Ile	Gln	Asn	Phe	Asn		
		500						505					510				
Val	Asp	Phe	Ser	Asn	Phe	Tyr	Ser	Glu	Ile	Gln	Lys	Ile	His	His	Thr		
	515						520					525					
Asn	Leu	Glu	Leu	Met	Asn	Glu	Val	Ile	Gln	Gln	Arg	Asp	Phe	Ser	Leu		
	530				535						540						
Glu	Asn	Ser	Gln	Lys	Gln	Tyr	Asn	Thr	Asn	Gln	Asn	Met	Gln	Leu	Lys		
	545				550				555					560			
Ile	Ser	Gln	Gln	Val	Leu	Gln	Thr	Leu	Asn	Thr	Leu	Gln	Gly	Ser	Leu		
			565					570					575				
Asn	Asn	Tyr	Asn	Ser	Lys	Cys	Ser	Glu	Val	Ile	Lys	Gly	Val	Thr	Glu		
		580						585					590				
Glu	Leu	Thr	Arg	Asn	Val	Asn	Thr	His	Lys	Ala	Lys	His	Asp	Ser	Thr		
	595						600					605					
Leu	Lys	Ser	Leu	Leu	Asn	Ile	Thr	Thr	Asn	Leu	Leu	Met	Asn	Gln	Met		
	610				615						620						
Asn	Glu	Leu	Val	Arg	Ser	Ile	Ser	Thr	Ser	Leu	Glu	Ile	Phe	Gln	Ser		
	625				630					635				640			
Asp	Ser	Thr	Ser	His	Tyr	Arg	Lys	Asp	Leu	Asn	Glu	Ile	Tyr	Gln	Ser		
			645					650					655				
His	Gln	Gln	Phe	Leu	Lys	Asn	Leu	Gln	Asn	Asp	Ile	Lys	Ser	Cys	Leu		
		660						665				670					
Asp	Ser	Ile	Gly	Ser	Ser	Ile	Leu	Thr	Ser	Ile	Asn	Glu	Ile	Ser	Gln		
	675						680					685					
Asn	Cys	Thr	Thr	Asn	Leu	Asn	Ser	Met	Asn	Val	Leu	Ile	Glu	Asn	Gln		
	690				695					700							
Gln	Ser	Gly	Ser	Ser	Lys	Leu	Ile	Lys	Glu	Gln	Asp	Leu	Glu	Ile	Lys		
	705				710				715					720			
Lys	Leu	Lys	Asn	Asp	Leu	Ile	Asn	Glu	Arg	Arg	Ile	Ser	Asn	Gln	Phe		
			725					730						735			
Asn	Gln	Gln	Leu	Ala	Glu	Met	Lys	Arg	Tyr	Phe	Gln	Asp	His	Val	Ser		
		740						745					750				
Arg	Thr	Arg	Ser	Glu	Phe	His	Asp	Glu	Leu	Asn	Lys	Cys	Ile	Asp	Asn		
	755						760					765					
Leu	Lys	Asp	Lys	Gln	Ser	Lys	Leu	Asp	Gln	Asp	Ile	Trp	Gln	Lys	Thr		
	770				775						780						
Ala	Ser	Ile	Phe	Asn	Glu	Thr	Asp	Ile	Val	Val	Asn	Lys	Ile	His	Ser		
	785				790				795					800			
Asp	Ser	Ile	Ala	Ser	Leu	Ala	His	Asn	Ala	Glu	Asn	Thr	Leu	Lys	Thr		
			805					810					815				
Val	Ser	Gln	Asn	Asn	Glu	Ser	Phe	Thr	Asn	Asp	Leu	Ile	Ser	Leu	Ser		

Arg	Gly	Met	820	Met	Asp	Ile	Ser	825	Ser	Lys	Leu	Arg	Ser	830	Leu	Pro	Ile
		835					840						845				
Asn	Glu	Phe	Leu	Asn	Lys	Ile	Ser	Gln	Thr	Ile	Cys	Glu	Thr	Cys	Gly		
	850					855					860						
Asp	Asp	Asn	Thr	Ile	Ala	Ser	Asn	Pro	Val	Leu	Thr	Ser	Ile	Lys	Lys		
865					870					875					880		
Phe	Gln	Asn	Ile	Ile	Cys	Ser	Asp	Ile	Ala	Leu	Thr	Asn	Glu	Lys	Ile		
				885					890					895			
Met	Ser	Leu	Ile	Asp	Glu	Ile	Gln	Ser	Gln	Ile	Glu	Thr	Ile	Ser	Asn		
		900					905						910				
Glu	Asn	Asn	Ile	Asn	Leu	Ile	Ala	Ile	Asn	Glu	Asn	Phe	Asn	Ser	Leu		
	915						920					925					
Cys	Asn	Phe	Ile	Leu	Thr	Asp	Tyr	Asp	Glu	Asn	Ile	Met	Gln	Ile	Ser		
	930					935					940						
Lys	Thr	Gln	Asp	Glu	Val	Leu	Ser	Glu	His	Cys	Glu	Lys	Leu	Gln	Ser		
945					950					955					960		
Leu	Lys	Ile	Leu	Gly	Met	Asp	Ile	Phe	Thr	Ala	His	Ser	Ile	Glu	Lys		
				965				970						975			
Pro	Leu	His	Glu	His	Thr	Arg	Pro	Glu	Ala	Ser	Val	Ile	Lys	Ala	Leu		
		980					985						990				
Pro	Leu	Leu	Asp	Tyr	Pro	Lys	Gln	Phe	Gln	Ile	Tyr	Arg	Asp	Ala	Glu		
	995					1000					1005						
Asn	Lys	Ser	Lys	Asp	Asp	Thr	Ser	Asn	Ser	Arg	Thr	Cys	Ile	Pro	Asn		
	1010					1015				1020							
Leu	Ser	Thr	Asn	Glu	Asn	Phe	Pro	Leu	Ser	Gln	Phe	Ser	Pro	Lys	Thr		
1025					1030					1035					1040		
Pro	Val	Pro	Val	Pro	Asp	Gln	Pro	Leu	Pro	Lys	Val	Leu	Ile	Pro	Lys		
				1045				1050						1055			
Ser	Ile	Asn	Ser	Ala	Lys	Ser	Asn	Arg	Ser	Lys	Thr	Leu	Pro	Asn	Thr		
		1060					1065						1070				
Glu	Gly	Thr	Gly	Arg	Glu	Ser	Gln	Asn	Asn	Leu	Lys	Arg	Arg	Phe	Thr		
	1075						1080					1085					
Thr	Glu	Pro	Ile	Leu	Lys	Gly	Glu	Glu	Thr	Glu	Asn	Asn	Asp	Ile	Leu		
	1090					1095					1100						
Gln	Asn	Lys	Lys	Leu	His	Gln											
1105					1110												

<210> 29
 <211> 706
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 29

Met	Ile	Gln	Lys	Met	Ser	Pro	Ser	Leu	Arg	Arg	Pro	Ser	Thr	Arg	Ser		
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Ser	Ser	Gly	Ser	Ser	Asn	Ile	Pro	Gln	Ser	Pro	Ser	Val	Arg	Ser	Thr		
		20					25					30					
Ser	Ser	Phe	Ser	Asn	Leu	Thr	Arg	Asn	Ser	Ile	Arg	Ser	Thr	Ser	Asn		
	35					40					45						
Ser	Gly	Ser	Gln	Ser	Ile	Ser	Ala	Ser	Ser	Thr	Arg	Ser	Asn	Ser	Pro		
	50					55				60							
Leu	Arg	Ser	Val	Ser	Ala	Lys	Ser	Asp	Pro	Phe	Leu	His	Pro	Gly	Arg		
65					70					75				80			
Ile	Arg	Ile	Arg	Arg	Ser	Asp	Ser	Ile	Asn	Asn	Asn	Ser	Arg	Lys	Asn		
				85				90						95			
Asp	Thr	Tyr	Thr	Gly	Ser	Ile	Thr	Val	Thr	Ile	Arg	Pro	Lys	Pro	Arg		
		100					105						110				
Ser	Val	Gly	Thr	Ser	Arg	Asp	His	Val	Gly	Leu	Lys	Ser	Pro	Arg	Tyr		
	115					120						125					
Ser	Gln	Pro	Arg	Ser	Asn	Ser	His	His	Gly	Ser	Asn	Thr	Phe	Val	Arg		
	130					135					140						

Asp	Pro	Trp	Phe	Ile	Thr	Asn	Asp	Lys	Thr	Ile	Val	His	Glu	Glu	Ile
145					150					155					160
Gly	Glu	Phe	Lys	Phe	Asp	His	Val	Phe	Ala	Ser	His	Cys	Thr	Asn	Leu
				165					170					175	
Glu	Val	Tyr	Glu	Arg	Thr	Ser	Lys	Pro	Met	Ile	Asp	Lys	Leu	Leu	Met
			180					185					190		
Gly	Phe	Asn	Ala	Thr	Ile	Phe	Ala	Tyr	Gly	Met	Thr	Gly	Ser	Gly	Lys
		195					200					205			
Thr	Phe	Thr	Met	Ser	Gly	Asn	Glu	Gln	Glu	Leu	Gly	Leu	Ile	Pro	Leu
	210					215					220				
Ser	Val	Ser	Tyr	Leu	Phe	Thr	Asn	Ile	Met	Glu	Gln	Ser	Met	Asn	Gly
225					230					235					240
Asp	Lys	Lys	Phe	Asp	Val	Ile	Ile	Ser	Tyr	Leu	Glu	Ile	Tyr	Asn	Glu
				245					250					255	
Arg	Ile	Tyr	Asp	Leu	Leu	Glu	Ser	Gly	Leu	Glu	Glu	Ser	Gly	Ser	Arg
			260					265					270		
Ile	Ser	Thr	Pro	Ser	Arg	Leu	Tyr	Met	Ser	Lys	Ser	Asn	Ser	Asn	Gly
		275					280					285			
Leu	Gly	Val	Glu	Leu	Lys	Ile	Arg	Asp	Asp	Ser	Gln	Tyr	Gly	Val	Lys
	290					295					300				
Val	Ile	Gly	Leu	Thr	Glu	Arg	Arg	Cys	Glu	Ser	Ser	Glu	Glu	Leu	Leu
305					310					315					320
Arg	Trp	Ile	Ala	Val	Gly	Asp	Lys	Ser	Arg	Lys	Ile	Gly	Glu	Thr	Asp
				325					330					335	
Tyr	Asn	Ala	Arg	Ser	Ser	Arg	Ser	His	Ala	Ile	Val	Leu	Ile	Arg	Leu
		340						345					350		
Thr	Ser	Thr	Asn	Val	Lys	Asn	Gly	Thr	Ser	Arg	Ser	Ser	Thr	Leu	Ser
		355					360					365			
Leu	Cys	Asp	Leu	Ala	Gly	Ser	Glu	Arg	Ala	Thr	Gly	Gln	Gln	Glu	Arg
	370					375					380				
Arg	Lys	Glu	Gly	Ser	Phe	Ile	Asn	Lys	Ser	Leu	Leu	Ala	Leu	Gly	Thr
385					390					395					400
Val	Ile	Ser	Lys	Leu	Ser	Ala	Asp	Lys	Met	Asn	Ser	Val	Gly	Ser	Asn
				405					410					415	
Ile	Pro	Ser	Pro	Ser	Ala	Ser	Gly	Ser	Ser	Ser	Ser	Ser	Gly	Asn	Ala
			420					425					430		
Thr	Asn	Asn	Gly	Thr	Ser	Pro	Ser	Asn	His	Ile	Pro	Tyr	Arg	Asp	Ser
		435					440					445			
Lys	Leu	Thr	Arg	Leu	Leu	Gln	Pro	Ala	Leu	Ser	Gly	Asp	Ser	Ile	Val
	450					455					460				
Thr	Thr	Ile	Cys	Thr	Val	Asp	Thr	Arg	Asn	Asp	Ala	Ala	Ala	Glu	Thr
465					470					475					480
Met	Asn	Thr	Leu	Arg	Phe	Ala	Ser	Arg	Ala	Lys	Asn	Val	Ala	Leu	His
				485					490					495	
Val	Ser	Lys	Lys	Ser	Ile	Ile	Ser	Asn	Gly	Asn	Asn	Asp	Gly	Asp	Lys
			500					505					510		
Asp	Arg	Thr	Ile	Glu	Leu	Leu	Arg	Arg	Gln	Leu	Glu	Glu	Gln	Arg	Arg
		515					520					525			
Met	Ile	Ser	Glu	Leu	Lys	Asn	Arg	Ser	Asn	Ile	Gly	Glu	Pro	Leu	Thr
	530					535					540				
Lys	Ser	Ser	Asn	Glu	Ser	Thr	Tyr	Lys	Asp	Ile	Lys	Ala	Thr	Gly	Asn
545					550					555					560
Asp	Gly	Asp	Pro	Asn	Leu	Ala	Leu	Met	Arg	Ala	Glu	Asn	Arg	Val	Leu
				565					570					575	
Lys	Tyr	Lys	Leu	Glu	Asn	Cys	Glu	Lys	Leu	Leu	Asp	Lys	Asp	Val	Val
			580					585					590		
Asp	Leu	Gln	Asp	Ser	Glu	Ile	Met	Glu	Ile	Val	Glu	Met	Leu	Pro	Phe
		595					600					605			
Glu	Val	Gly	Thr	Leu	Leu	Glu	Thr	Lys	Phe	Gln	Gly	Leu	Glu	Ser	Gln
	610					615					620				
Ile	Arg	Gln	Tyr	Arg	Lys	Tyr	Thr	Gln	Lys	Leu	Glu	Asp	Lys	Ile	Met
625					630					635					640

Ala	Leu	Glu	Lys	Ser	Gly	His	Thr	Ala	Met	Ser	Leu	Thr	Gly	Cys	Asp
				645					650					655	
Gly	Thr	Glu	Val	Ile	Glu	Leu	Gln	Lys	Met	Leu	Glu	Arg	Lys	Asp	Lys
			660					665					670		
Met	Ile	Glu	Ala	Leu	Gln	Ser	Ala	Lys	Arg	Leu	Arg	Asp	Arg	Ala	Leu
		675					680					685			
Lys	Pro	Leu	Ile	Asn	Thr	Gln	Gln	Ser	Pro	His	Pro	Val	Val	Asp	Asn
	690					695					700				
Asp	Lys														
705															

<210> 30
 <211> 540
 <212> PRT
 <213> Caenorhabditis elegans

<400> 30

Met	Ser	Asn	Met	Ser	Gln	Asp	Asp	Val	Thr	Thr	Gly	Leu	Arg	Thr	Val
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Gln	Gln	Gly	Leu	Glu	Ala	Leu	Arg	Glu	Glu	His	Ser	Thr	Ile	Ser	Asn
			20					25					30		
Thr	Leu	Glu	Thr	Ser	Val	Lys	Gly	Val	Lys	Glu	Asp	Glu	Ala	Pro	Leu
		35					40					45			
Pro	Lys	Gln	Lys	Leu	Ser	Gln	Ile	Asn	Asp	Asn	Leu	Asp	Lys	Leu	Val
	50					55					60				
Cys	Gly	Val	Asp	Glu	Thr	Ser	Leu	Met	Leu	Met	Val	Phe	Gln	Leu	Thr
65					70					75					80
Gln	Gly	Met	Asp	Ala	Gln	His	Gln	Lys	Tyr	Gln	Ala	Gln	Arg	Arg	Arg
				85					90					95	
Leu	Cys	Gln	Glu	Asn	Ala	Trp	Leu	Arg	Asp	Glu	Leu	Ser	Ser	Thr	Gln
			100					105					110		
Ile	Lys	Leu	Gln	Gln	Ser	Glu	Gln	Met	Val	Ala	Gln	Leu	Glu	Glu	Glu
		115					120					125			
Asn	Lys	His	Leu	Lys	Tyr	Met	Ala	Ser	Ile	Lys	Gln	Leu	Asp	Asp	Gly
	130					135					140				
Thr	Gln	Ser	Asp	Thr	Lys	Thr	Ser	Val	Asp	Val	Gly	Pro	Gln	Pro	Val
145					150					155					160
Thr	Asn	Glu	Thr	Leu	Gln	Glu	Leu	Gly	Phe	Gly	Pro	Glu	Asp	Glu	Glu
				165					170					175	
Asp	Met	Asn	Ala	Ser	Gln	Phe	Asn	Gln	Pro	Thr	Pro	Ala	Asn	Gln	Met
			180					185					190		
Ala	Ala	Ser	Ala	Asn	Val	Gly	Tyr	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr
		195					200					205			
Leu	His	Asn	Leu	Val	Ile	Gln	Tyr	Ala	Ser	Gln	Gly	Arg	Tyr	Glu	Val
	210					215					220				
Ala	Val	Pro	Leu	Cys	Lys	Gln	Ala	Leu	Glu	Asp	Leu	Glu	Lys	Thr	Ser
225					230					235					240
Gly	His	Asp	His	Pro	Asp	Val	Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu
				245					250					255	
Val	Tyr	Arg	Asp	Gln	Asn	Lys	Tyr	Lys	Glu	Ala	Ala	Asn	Leu	Leu	Asn
			260					265					270		
Glu	Ala	Leu	Ser	Ile	Arg	Glu	Lys	Cys	Leu	Gly	Glu	Ser	His	Pro	Ala
		275					280					285			
Val	Ala	Ala	Thr	Leu	Asn	Asn	Leu	Ala	Val	Leu	Phe	Gly	Lys	Arg	Gly
	290					295					300				
Lys	Phe	Lys	Asp	Ala	Glu	Pro	Leu	Cys	Lys	Arg	Ala	Leu	Glu	Ile	Arg
305					310					315					320
Glu	Lys	Val	Leu	Gly	Asp	Asp	His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn
				325					330					335	
Asn	Leu	Ala	Leu	Leu	Cys	Gln	Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu
			340					345					350		
Lys	Tyr	Tyr	Lys	Arg	Ala	Leu	Glu	Ile	Tyr	Glu	Ser	Lys	Leu	Gly	Pro

Asp	Asp	355	Pro	Asn	Val	Ala	Lys	360	Thr	Lys	Asn	Asn	Leu	365	Ser	Ser	Ala	Tyr
370	Lys	Gln	Gly	Lys	Tyr	Lys	Glu	375	Ala	Glu	Glu	Leu	380	Tyr	Lys	Gln	Ile	
385	Thr	Arg	Ala	His	Glu	Arg	Glu	390	Phe	Gly	Gln	Ile	395	Ser	Gly	Glu	Asn	
405	Pro	Ile	Trp	Gln	Ile	Ala	Glu	410	Arg	Glu	Glu	Asn	415	Lys	His	Lys		
420	Gly	Glu	Gly	Ala	Thr	Ala	Asn	425	Gln	Ala	Gly	Trp	430	Ala	Lys	Ala	Ala	
435	Val	Asp	Ser	Pro	Thr	Val	Thr	440	Thr	Thr	Thr	Leu	445	Lys	Asn	Leu	Gly	
450	Tyr	Arg	Arg	Gln	Gly	Lys	Tyr	455	Glu	Ala	Ala	Glu	460	Thr	Leu	Glu	Asp	
465	Ala	Leu	Arg	Ala	Lys	Lys	Gln	470	His	Glu	Pro	Leu	475	Arg	Ser	Gly	Ala	
485	Gly	Gly	Ile	Asp	Glu	Met	Ser	490	Gln	Ser	Met	Met	495	Ala	Ser	Thr	Ile	
500	Gly	Gly	Ser	Arg	Asn	Ser	Met	505	Thr	Ser	Thr	Ser	510	Gln	Thr	Gly	Leu	
515	Lys	Asn	Lys	Leu	Met	Asn	Ala	520	Leu	Gly	Phe	Asn	525	Ser				
530							535						540					

<210> 31
 <211> 508
 <212> PRT
 <213> *Drosophila melanogaster*

Met	Thr	Gln	Met	Ser	Gln	Asp	Glu	Ile	Ile	Thr	Asn	Thr	Lys	Thr	Val
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Leu	Gln	Gly	Leu	Glu	Ala	Leu	Arg	Val	Glu	His	Val	Ser	Ile	Met	Asn
20								25					30		
Gly	Ile	Ala	Glu	Val	Gln	Lys	Asp	Asn	Glu	Lys	Ser	Asp	Met	Leu	Arg
35							40					45			
Lys	Asn	Ile	Glu	Asn	Ile	Glu	Leu	Gly	Leu	Ser	Glu	Ala	Gln	Val	Met
50						55					60				
Met	Ala	Leu	Thr	Ser	His	Leu	Gln	Asn	Ile	Glu	Ala	Glu	Lys	His	Lys
65					70					75					80
Leu	Lys	Thr	Gln	Val	Arg	Arg	Leu	His	Gln	Glu	Asn	Ala	Trp	Leu	Arg
85								90					95		
Asp	Glu	Leu	Ala	Asn	Thr	Gln	Gln	Lys	Phe	Gln	Ala	Ser	Glu	Gln	Leu
100								105					110		
Val	Ala	Gln	Leu	Glu	Glu	Glu	Lys	His	Leu	Glu	Phe	Met	Ala	Ser	
115							120					125			
Val	Lys	Lys	Tyr	Asp	Glu	Asn	Gln	Glu	Gln	Asp	Asp	Ala	Cys	Asp	Lys
130						135					140				
Ser	Arg	Thr	Asp	Pro	Val	Val	Glu	Leu	Phe	Pro	Asp	Glu	Glu	Asn	Glu
145					150					155					160
Asp	Arg	His	Asn	Met	Ser	Pro	Thr	Pro	Pro	Ser	Gln	Phe	Ala	Asn	Gln
165								170						175	
Thr	Ser	Gly	Tyr	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	Leu	His	Asn	Leu
180								185					190		
Val	Ile	Gln	Tyr	Ala	Ser	Gln	Gly	Arg	Tyr	Glu	Val	Ala	Val	Pro	Leu
195							200					205			
Cys	Lys	Gln	Ala	Leu	Glu	Asp	Leu	Glu	Arg	Thr	Ser	Gly	His	Asp	His
210						215					220				
Pro	Asp	Val	Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu	Val	Tyr	Arg	Asp
225					230					235					240
Gln	Asn	Lys	Tyr	Lys	Glu	Ala	Ala	Asn	Leu	Leu	Asn	Asp	Ala	Leu	Ser
245								250						255	

Ile	Arg	Gly	Lys	Thr	Leu	Gly	Glu	Asn	His	Pro	Ala	Val	Ala	Ala	Thr
			260					265					270		
Leu	Asn	Asn	Leu	Ala	Val	Leu	Tyr	Gly	Lys	Arg	Gly	Lys	Tyr	Lys	Asp
		275					280					285			
Ala	Glu	Pro	Leu	Cys	Lys	Arg	Ala	Leu	Glu	Ile	Arg	Glu	Lys	Val	Leu
		290				295					300				
Gly	Lys	Asp	His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn	Asn	Leu	Ala	Leu
305					310					315					320
Leu	Cys	Gln	Asn	Gln	Gly	Lys	Tyr	Asp	Glu	Val	Glu	Lys	Tyr	Tyr	Gln
				325					330					335	
Arg	Ala	Leu	Asp	Ile	Tyr	Glu	Ser	Lys	Leu	Gly	Pro	Asp	Asp	Pro	Asn
			340					345					350		
Val	Ala	Lys	Thr	Lys	Asn	Asn	Leu	Ala	Gly	Cys	Tyr	Leu	Lys	Gln	Gly
		355					360					365			
Arg	Tyr	Thr	Glu	Ala	Glu	Ile	Leu	Tyr	Lys	Gln	Val	Leu	Thr	Arg	Ala
		370				375					380				
His	Glu	Arg	Glu	Phe	Gly	Ala	Ile	Asp	Ser	Lys	Asn	Lys	Pro	Ile	Trp
385					390					395					400
Gln	Val	Ala	Glu	Glu	Arg	Glu	Glu	His	Lys	Phe	Asp	Asn	Arg	Glu	Asn
				405					410					415	
Thr	Pro	Tyr	Gly	Glu	Tyr	Gly	Gly	Trp	His	Lys	Ala	Ala	Lys	Val	Asp
			420					425					430		
Ser	Pro	Thr	Val	Thr	Thr	Thr	Leu	Lys	Asn	Leu	Gly	Ala	Leu	Tyr	Arg
		435					440					445			
Arg	Gln	Gly	Met	Phe	Glu	Ala	Ala	Glu	Thr	Leu	Glu	Asp	Cys	Ala	Met
		450				455					460				
Arg	Ser	Lys	Lys	Glu	Ala	Tyr	Asp	Leu	Ala	Lys	Gln	Thr	Lys	Leu	Ser
465					470					475					480
Gln	Leu	Leu	Thr	Ser	Asn	Glu	Lys	Arg	Arg	Ser	Lys	Ala	Ile	Lys	Glu
				485				490						495	
Asp	Leu	Asp	Phe	Ser	Glu	Glu	Lys	Asn	Ala	Lys	Pro				
			500					505							

<210> 32
 <211> 571
 <212> PRT
 <213> Loligo pealeii

<400> 32

Met	Glu	Val	Thr	Gln	Thr	Val	Lys	Ser	Tyr	Arg	Ile	Lys	Lys	Ile	Glu
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Glu	Ile	Gly	Lys	Met	Thr	Ala	Leu	Ser	Gln	Glu	Glu	Ile	Ile	Ser	Asn
			20					25					30		
Thr	Lys	Thr	Val	Ile	Gln	Gly	Leu	Asp	Thr	Leu	Lys	Asn	Glu	His	Asn
		35					40					45			
Gln	Ile	Leu	Asn	Ser	Leu	Leu	Thr	Ser	Met	Lys	Thr	Ile	Arg	Lys	Glu
	50					55					60				
Asn	Gly	Asp	Thr	Asn	Leu	Val	Glu	Glu	Lys	Ala	Asn	Ile	Leu	Lys	Lys
65					70				75						80
Ser	Val	Asp	Ser	Ile	Glu	Leu	Gly	Leu	Gly	Glu	Ala	Gln	Val	Met	Met
			85					90						95	
Ala	Leu	Ala	Asn	His	Leu	Gln	His	Thr	Glu	Ala	Glu	Lys	Gln	Lys	Leu
			100					105					110		
Arg	Ala	Gln	Val	Arg	Arg	Leu	Cys	Gln	Glu	Asn	Ala	Trp	Leu	Arg	Asp
		115					120					125			
Glu	Leu	Ala	Asn	Thr	Gln	Gln	Lys	Leu	Gln	Met	Ser	Glu	Gln	Lys	Val
	130					135					140				
Ala	Thr	Ile	Glu	Glu	Glu	Lys	Lys	His	Leu	Glu	Phe	Met	Asn	Glu	Met
145					150				155						160
Lys	Lys	Tyr	Asp	Thr	Asn	Glu	Ala	Gln	Val	Asn	Glu	Glu	Lys	Glu	Ser
				165				170						175	
Glu	Gln	Ser	Ser	Leu	Asp	Leu	Gly	Phe	Pro	Asp	Asp	Asp	Asp	Asp	Gly

			180					185					190				
Gly	Gln	Pro	Glu	Val	Leu	Ser	Pro	Thr	Gln	Pro	Ser	Ala	Met	Ala	Gln		
		195					200					205					
Ala	Ala	Ser	Gly	Gly	Cys	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	Leu	His		
	210					215					220						
Asn	Leu	Val	Ile	Gln	Tyr	Ala	Ser	Gln	Gly	Arg	Tyr	Glu	Val	Ala	Val		
225					230					235					240		
Pro	Leu	Cys	Lys	Gln	Ala	Leu	Glu	Asp	Leu	Glu	Lys	Thr	Ser	Gly	His		
				245					250					255			
Asp	His	Pro	Asp	Val	Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu	Val	Tyr		
			260					265					270				
Arg	Asp	Gln	Gly	Lys	Tyr	Lys	Glu	Ala	Ala	Asn	Leu	Leu	Asn	Asp	Ala		
		275					280					285					
Leu	Gly	Ile	Arg	Glu	Lys	Thr	Leu	Gly	Pro	Asp	His	Pro	Ala	Val	Ala		
	290					295					300						
Ala	Thr	Leu	Asn	Asn	Leu	Ala	Val	Leu	Tyr	Gly	Lys	Arg	Gly	Lys	Tyr		
305					310					315					320		
Lys	Asp	Ala	Glu	Pro	Leu	Cys	Lys	Arg	Ala	Leu	Val	Ile	Arg	Glu	Lys		
				325				330						335			
Val	Leu	Gly	Lys	Asp	His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn	Asn	Leu		
			340					345					350				
Ala	Leu	Leu	Cys	Gln	Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu	Arg	Tyr		
		355					360					365					
Tyr	Gln	Arg	Ala	Leu	Glu	Ile	Tyr	Gln	Lys	Glu	Leu	Gly	Pro	Asp	Asp		
	370					375					380						
Pro	Asn	Val	Ala	Lys	Thr	Lys	Asn	Asn	Leu	Ala	Ser	Ala	Tyr	Leu	Lys		
385					390					395					400		
Gln	Gly	Lys	Tyr	Lys	Gln	Ala	Glu	Ile	Leu	Tyr	Lys	Glu	Val	Leu	Thr		
				405				410						415			
Arg	Ala	His	Glu	Lys	Glu	Phe	Gly	Lys	Val	Asp	Asp	Asp	Asn	Lys	Pro		
			420					425					430				
Ile	Trp	Met	Gln	Ala	Glu	Glu	Arg	Glu	Glu	Asn	Lys	Ala	Lys	Tyr	Lys		
		435					440					445					
Asp	Gly	Ala	Pro	Gln	Pro	Asp	Tyr	Gly	Ser	Trp	Leu	Lys	Ala	Val	Lys		
	450					455					460						
Val	Asp	Ser	Pro	Thr	Val	Thr	Thr	Thr	Leu	Lys	Asn	Leu	Gly	Ala	Leu		
465					470					475					480		
Tyr	Arg	Arg	Gln	Gly	Lys	Tyr	Glu	Ala	Ala	Glu	Thr	Leu	Glu	Glu	Cys		
				485				490						495			
Ala	Leu	Arg	Ser	Arg	Lys	Ser	Ala	Leu	Glu	Val	Val	Arg	Gln	Thr	Lys		
			500					505					510				
Ile	Ser	Asp	Val	Leu	Gly	Ser	Asp	Phe	Ser	Lys	Gly	Gln	Ser	Pro	Lys		
		515					520					525					
Asp	Arg	Lys	Arg	Ser	Asn	Ser	Arg	Asp	Arg	Asn	Arg	Arg	Asp	Ser	Met		
	530					535					540						
Asp	Ser	Val	Ser	Tyr	Glu	Lys	Ser	Gly	Asp	Gly	Asp	Glu	His	Glu	Lys		
545					550					555					560		
Ser	Lys	Leu	His	Val	Gly	Thr	Ser	His	Lys	Gln							
				565					570								

<210> 33
 <211> 686
 <212> PRT
 <213> Strongylocentrotus purpuratus

<400> 33
 Met Ser Gly Ser Lys Leu Ser Thr Pro Asn Asn Ser Gly Gly Gly Gln
 1 5 10 15
 Gly Asn Leu Ser Gln Glu Gln Ile Ile Thr Gly Thr Arg Glu Val Ile
 20 25 30
 Lys Gly Leu Glu Gln Leu Lys Asn Glu His Asn Asp Ile Leu Asn Ser
 35 40 45

Leu	Tyr	Gln	Ser	Leu	Lys	Met	Leu	Lys	Lys	Asp	Thr	Pro	Gly	Asp	Ser
50						55				60					
Asn	Leu	Val	Glu	Glu	Lys	Thr	Asp	Ile	Ile	Glu	Lys	Ser	Leu	Glu	Ser
65					70					75					80
Leu	Glu	Leu	Gly	Leu	Gly	Glu	Ala	Lys	Val	Met	Met	Ala	Leu	Gly	His
				85					90					95	
His	Leu	Asn	Met	Val	Glu	Ala	Glu	Lys	Gln	Lys	Leu	Arg	Ala	Gln	Val
			100					105					110		
Arg	Arg	Leu	Val	Gln	Glu	Asn	Thr	Trp	Leu	Arg	Asp	Glu	Leu	Ala	Ala
			115					120				125			
Thr	Gln	Gln	Lys	Leu	Gln	Thr	Ser	Glu	Gln	Asn	Leu	Ala	Asp	Leu	Glu
						135					140				
Val	Lys	Tyr	Lys	His	Leu	Glu	Tyr	Met	Asn	Ser	Ile	Lys	Lys	Tyr	Asp
145					150					155					160
Glu	Asp	Arg	Thr	Pro	Asp	Glu	Glu	Ala	Ser	Ser	Ser	Asp	Pro	Leu	Asp
				165					170					175	
Leu	Gly	Phe	Pro	Glu	Asp	Asp	Asp	Gly	Gly	Gln	Ala	Asp	Glu	Ser	Tyr
			180					185					190		
Pro	Gln	Pro	Gln	Thr	Gly	Ser	Gly	Ser	Val	Ser	Ala	Ala	Ala	Gly	Gly
			195				200					205			
Tyr	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	Leu	His	Asn	Leu	Val	Ile	Gln
						215					220				
Tyr	Ala	Ser	Gln	Ser	Arg	Tyr	Glu	Val	Ala	Val	Pro	Leu	Cys	Lys	Gln
225					230					235					240
Ala	Leu	Glu	Asp	Leu	Glu	Lys	Thr	Ser	Gly	His	Asp	His	Pro	Asp	Val
				245					250					255	
Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu	Val	Tyr	Arg	Asp	Gln	Asn	Lys
			260					265					270		
Tyr	Lys	Glu	Ala	Gly	Asn	Leu	Leu	His	Asp	Ala	Leu	Ala	Ile	Arg	Glu
			275				280					285			
Lys	Thr	Leu	Gly	Pro	Asp	His	Pro	Ala	Val	Ala	Ala	Thr	Leu	Asn	Asn
						295				300					
Leu	Ala	Val	Leu	Tyr	Gly	Lys	Arg	Gly	Lys	Tyr	Lys	Glu	Ala	Glu	Pro
305					310					315					320
Leu	Cys	Lys	Arg	Ala	Leu	Glu	Ile	Arg	Glu	Lys	Val	Leu	Gly	Lys	Asp
				325					330					335	
His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn	Asn	Leu	Ala	Leu	Leu	Cys	Gln
			340					345					350		
Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu	Trp	Tyr	Tyr	Gln	Arg	Ala	Leu
			355				360					365			
Glu	Ile	Tyr	Glu	Lys	Lys	Leu	Gly	Pro	Asp	Asp	Pro	Asn	Val	Ala	Lys
						375					380				
Thr	Lys	Asn	Asn	Leu	Ala	Ala	Ala	Tyr	Leu	Lys	Gln	Gly	Lys	Tyr	Lys
385					390					395					400
Ala	Ala	Glu	Thr	Leu	Tyr	Lys	Gln	Val	Leu	Thr	Arg	Ala	His	Glu	Arg
				405					410					415	
Glu	Phe	Gly	Leu	Ser	Ala	Asp	Asp	Lys	Asp	Asn	Lys	Pro	Ile	Trp	Met
			420					425					430		
Gln	Ala	Glu	Glu	Arg	Glu	Glu	Lys	Gly	Lys	Phe	Lys	Asp	Asn	Ala	Pro
			435				440					445			
Tyr	Gly	Asp	Tyr	Gly	Gly	Trp	His	Lys	Ala	Ala	Lys	Val	Asp	Ser	Arg
						455					460				
Ser	Arg	Ser	Ser	Pro	Thr	Val	Thr	Thr	Thr	Leu	Lys	Asn	Leu	Gly	Ala
465					470					475					480
Leu	Tyr	Arg	Arg	Gln	Gly	Lys	Tyr	Asp	Ala	Ala	Glu	Ile	Leu	Glu	Glu
				485					490					495	
Cys	Ala	Met	Lys	Ser	Arg	Arg	Asn	Ala	Leu	Asp	Met	Val	Arg	Glu	Thr
			500					505					510		
Lys	Val	Arg	Glu	Leu	Leu	Gly	Gln	Asp	Leu	Ser	Thr	Asp	Val	Pro	Arg
			515				520					525			
Ser	Glu	Ala	Met	Ala	Lys	Glu	Arg	His	His	Arg	Arg	Ser	Ser	Gly	Thr
			530			535					540				

Pro	Arg	His	Gly	Ser	Thr	Glu	Ser	Val	Ser	Tyr	Glu	Lys	Thr	Asp	Gly
545					550					555					560
Ser	Glu	Glu	Val	Ser	Ile	Gly	Val	Ala	Trp	Lys	Ala	Lys	Arg	Lys	Ala
				565					570						575
Lys	Asp	Arg	Ser	Arg	Ser	Ile	Pro	Ala	Gly	Tyr	Val	Glu	Ile	Pro	Arg
			580					585					590		
Ser	Pro	Pro	His	Val	Leu	Val	Glu	Asn	Gly	Asp	Gly	Lys	Leu	Arg	Arg
		595					600					605			
Ser	Gly	Ser	Leu	Ser	Lys	Leu	Arg	Ala	Ser	Val	Arg	Arg	Ser	Ser	Thr
610						615					620				
Lys	Leu	Leu	Asn	Lys	Leu	Lys	Gly	Arg	Glu	Ser	Asp	Asp	Asp	Gly	Gly
625					630					635					640
Met	Lys	Arg	Ala	Ser	Ser	Met	Ser	Val	Leu	Pro	Ser	Arg	Gly	Asn	Asp
				645					650					655	
Glu	Ser	Thr	Pro	Ala	Pro	Ile	Gln	Leu	Ser	Gln	Arg	Gly	Arg	Val	Gly
			660					665					670		
Ser	His	Asp	Asn	Leu	Ser	Ser	Arg	Arg	Gln	Ser	Gly	Asn	Phe		
		675					680					685			

<210> 34
 <211> 452
 <212> PRT
 <213> Gallus gallus

<400> 34

Met	Arg	Arg	Ala	Leu	Gly	Thr	Leu	Gly	Cys	Cys	Leu	Ala	Leu	Leu	Leu
1				5					10					15	
Pro	Leu	Leu	Pro	Ala	Ala	Arg	Gly	Val	Pro	His	Arg	His	Arg	Arg	Gln
			20					25					30		
Pro	Leu	Gly	Ser	Gly	Leu	Gly	Arg	His	Gly	Ala	Ala	Asp	Thr	Ala	Cys
		35					40					45			
Lys	Asn	Arg	Pro	Leu	Asp	Leu	Val	Phe	Ile	Ile	Asp	Ser	Ser	Arg	Ser
	50					55					60				
Val	Arg	Pro	Glu	Glu	Phe	Glu	Lys	Val	Lys	Ile	Phe	Leu	Ser	Lys	Met
65					70					75					80
Ile	Asp	Thr	Leu	Asp	Val	Gly	Glu	Arg	Thr	Thr	Arg	Val	Ala	Val	Met
			85						90					95	
Asn	Tyr	Ala	Ser	Thr	Val	Lys	Val	Glu	Phe	Pro	Leu	Arg	Thr	Tyr	Phe
			100					105					110		
Asp	Lys	Ala	Ser	Met	Lys	Glu	Ala	Val	Ser	Arg	Ile	Gln	Pro	Leu	Ser
		115					120					125			
Ala	Gly	Thr	Met	Thr	Gly	Leu	Ala	Ile	Gln	Ala	Ala	Met	Asp	Glu	Val
	130					135					140				
Phe	Thr	Glu	Glu	Met	Gly	Thr	Arg	Pro	Ala	Asn	Phe	Asn	Ile	Pro	Lys
145					150					155					160
Val	Val	Ile	Ile	Val	Thr	Asp	Gly	Arg	Pro	Gln	Asp	Gln	Val	Glu	Asn
				165					170					175	
Val	Ala	Ala	Asn	Ala	Arg	Thr	Ala	Gly	Ile	Glu	Ile	Tyr	Ala	Val	Gly
			180					185					190		
Val	Gly	Arg	Ala	Asp	Met	Gln	Ser	Leu	Arg	Ile	Met	Ala	Ser	Glu	Pro
		195					200					205			
Leu	Asp	Glu	His	Val	Phe	Tyr	Val	Glu	Thr	Tyr	Gly	Val	Ile	Glu	Lys
	210					215					220				
Leu	Thr	Ser	Lys	Phe	Arg	Glu	Thr	Phe	Cys	Ala	Ala	Asn	Thr	Cys	Ala
225					230					235					240
Leu	Gly	Thr	His	Asp	Cys	Glu	Gln	Val	Cys	Val	Ser	Asn	Asp	Gly	Ser
				245					250					255	
Tyr	Leu	Cys	Asp	Cys	Tyr	Glu	Gly	Tyr	Thr	Leu	Asn	Pro	Asp	Lys	Arg
			260					265					270		
Thr	Cys	Ser	Ala	Val	Asp	Val	Cys	Ala	Pro	Gly	Arg	His	Glu	Cys	Asp
		275					280					285			
Gln	Ile	Cys	Val	Ser	Asn	Asn	Gly	Ser	Tyr	Val	Cys	Glu	Cys	Phe	Glu

290		295		300
Gly Tyr Thr Leu Asn Pro Asp Lys Lys Thr Cys Ser Ala Met Asp Val				
305		310		320
Cys Ala Pro Gly Arg His Asp Cys Ala Gln Val Cys Arg Arg Asn Gly				
		325		335
Gly Ser Tyr Ser Cys Asp Cys Phe Glu Gly Phe Thr Leu Asn Pro Asp				
		340		350
Lys Lys Thr Cys Ser Ala Val Asp Val Cys Ala Pro Gly Arg His Asp				
		355		365
Cys Glu Gln Val Cys Val Arg Asp Asp Leu Phe Tyr Thr Cys Asp Cys				
		370		380
Tyr Gln Gly Tyr Val Leu Asn Pro Asp Lys Lys Thr Cys Ser Arg Ala				
385		390		400
Thr Thr Ser Ser Leu Val Thr Asp Glu Glu Ala Cys Lys Cys Glu Ala				
		405		415
Ile Ala Ala Leu Gln Asp Ser Val Thr Ser Arg Leu Glu Ala Leu Ser				
		420		430
Thr Lys Leu Asp Glu Val Ser Gln Lys Leu Gln Ala Tyr Gln Asp Arg				
		435		445
Gln Gln Val Val		440		
450				

<210> 35
 <211> 486
 <212> PRT
 <213> Homo sapiens

<400> 35
Met Pro Arg Pro Ala Pro Ala Arg Arg Leu Pro Gly Leu Leu Leu Leu
1 5 10 15
Leu Trp Pro Leu Leu Leu Leu Pro Ser Ala Ala Pro Asp Pro Val Ala
20 25 30
Arg Pro Gly Phe Arg Arg Leu Glu Thr Arg Gly Pro Gly Gly Ser Pro
35 40 45
Gly Arg Arg Pro Ser Pro Ala Ala Pro Asp Gly Ala Pro Ala Ser Gly
50 55 60
Thr Ser Glu Pro Gly Arg Ala Arg Gly Ala Gly Val Cys Lys Ser Arg
65 70 75 80
Pro Leu Asp Leu Val Phe Ile Ile Asp Ser Ser Arg Ser Val Arg Pro
85 90 95
Leu Glu Phe Thr Lys Val Lys Thr Phe Val Ser Arg Ile Ile Asp Thr
100 105 110
Leu Asp Ile Gly Pro Ala Asp Thr Arg Val Ala Val Val Asn Tyr Ala
115 120 125
Ser Thr Val Lys Ile Glu Phe Gln Leu Gln Ala Tyr Thr Asp Lys Gln
130 135 140
Ser Leu Lys Gln Ala Val Gly Arg Ile Thr Pro Leu Ser Thr Gly Thr
145 150 155 160
Met Ser Gly Leu Ala Ile Gln Thr Ala Met Asp Glu Ala Phe Thr Val
165 170 175
Glu Ala Gly Ala Arg Glu Pro Ser Ser Asn Ile Pro Lys Val Ala Ile
180 185 190
Ile Val Thr Asp Gly Arg Pro Gln Asp Gln Val Asn Glu Val Ala Ala
195 200 205
Arg Ala Gln Ala Ser Gly Ile Glu Leu Tyr Ala Val Gly Val Asp Arg
210 215 220
Ala Asp Met Ala Ser Leu Lys Met Met Ala Ser Glu Pro Leu Glu Glu
225 230 235 240
His Val Phe Tyr Val Glu Thr Tyr Gly Val Ile Glu Lys Leu Ser Ser
245 250 255
Arg Phe Gln Glu Thr Phe Cys Ala Leu Asp Pro Cys Val Leu Gly Thr
260 265 270

His Gln Cys Gln His Val Cys Ile Ser Asp Gly Glu Gly Lys His His
 275 280 285
 Cys Glu Cys Ser Gln Gly Tyr Thr Leu Asn Ala Asp Lys Lys Thr Cys
 290 295 300
 Ser Ala Leu Asp Arg Cys Ala Leu Asn Thr His Gly Cys Glu His Ile
 305 310 315 320
 Cys Val Asn Asp Arg Ser Gly Ser Tyr His Cys Glu Cys Tyr Glu Gly
 325 330 335
 Tyr Thr Leu Asn Glu Asp Arg Lys Thr Cys Ser Ala Gln Asp Lys Cys
 340 345 350
 Ala Leu Gly Thr His Gly Cys Gln His Ile Cys Val Asn Asp Arg Thr
 355 360 365
 Gly Ser His His Cys Glu Cys Tyr Glu Gly Tyr Thr Leu Asn Ala Asp
 370 375 380
 Lys Lys Thr Cys Ser Val Arg Asp Lys Cys Ala Leu Gly Ser His Gly
 385 390 395 400
 Cys Gln His Ile Cys Val Ser Asp Gly Ala Ala Ser Tyr His Cys Asp
 405 410 415
 Cys Tyr Pro Gly Tyr Thr Leu Asn Glu Asp Lys Lys Thr Cys Ser Ala
 420 425 430
 Thr Glu Glu Ala Arg Arg Leu Val Ser Thr Glu Asp Ala Cys Gly Cys
 435 440 445
 Glu Ala Thr Leu Ala Phe Gln Asp Lys Val Ser Ser Tyr Leu Gln Arg
 450 455 460
 Leu Asn Thr Lys Leu Asp Asp Ile Leu Glu Lys Leu Lys Ile Asn Glu
 465 470 475 480
 Tyr Gly Gln Ile His Arg
 485

<210> 36
 <211> 481
 <212> PRT
 <213> Mus musculus

<400> 36
 Met Leu Leu Ser Ala Pro Leu Arg His Leu Pro Gly Leu Leu Leu Leu
 1 5 10 15
 Leu Trp Pro Leu Leu Leu Pro Ser Leu Ala Ala Pro Gly Arg Leu
 20 25 30
 Ala Arg Ala Ser Val Arg Arg Leu Gly Thr Arg Val Pro Gly Gly Ser
 35 40 45
 Pro Gly His Leu Ser Ala Leu Ala Thr Ser Thr Arg Ala Pro Tyr Ser
 50 55 60
 Gly Gly Arg Gly Ala Gly Val Cys Lys Ser Arg Pro Leu Asp Leu Val
 65 70 75 80
 Phe Ile Ile Asp Ser Ser Arg Ser Val Arg Pro Leu Glu Phe Thr Lys
 85 90 95
 Val Lys Thr Phe Val Ser Arg Ile Ile Asp Thr Leu Asp Ile Gly Ala
 100 105 110
 Thr Asp Thr Arg Val Ala Val Val Asn Tyr Ala Ser Thr Val Lys Ile
 115 120 125
 Glu Phe Gln Leu Asn Thr Tyr Ser Asp Lys Gln Ala Leu Lys Gln Ala
 130 135 140
 Val Ala Arg Ile Thr Pro Leu Ser Thr Gly Thr Met Ser Gly Leu Ala
 145 150 155 160
 Ile Gln Thr Ala Met Glu Glu Ala Phe Thr Val Glu Ala Gly Ala Arg
 165 170 175
 Gly Pro Met Ser Asn Ile Pro Lys Val Ala Ile Ile Val Thr Asp Gly
 180 185 190
 Arg Pro Gln Asp Gln Val Asn Glu Val Ala Ala Arg Ala Arg Ala Ser
 195 200 205
 Gly Ile Glu Leu Tyr Ala Val Gly Val Asp Arg Ala Asp Met Glu Ser

210	215	220
Leu Lys Met Met Ala Ser Lys Pro Leu Glu Glu His Val Phe Tyr Val		
225	230	235
Glu Thr Tyr Gly Val Ile Glu Lys Leu Ser Ala Arg Phe Gln Glu Thr		
	245	250
Phe Cys Ala Leu Asp Gln Cys Met Leu Gly Thr His Gln Cys Gln His		
	260	265
Val Cys Val Ser Asp Gly Asp Gly Lys His His Cys Glu Cys Ser Gln		
	275	280
Gly Tyr Thr Leu Asn Ala Asp Gly Lys Thr Cys Ser Ala Ile Asp Lys		
	290	295
Cys Ala Leu Ser Thr His Gly Cys Glu Gln Ile Cys Ile Asn Asp Arg		
305	310	315
Asn Gly Ser Tyr His Cys Glu Cys Tyr Gly Tyr Ala Leu Asn Ala		
	325	330
Asp Arg Arg Thr Cys Ala Ala Leu Asp Lys Cys Ala Ser Gly Thr His		
	340	345
Gly Cys Gln His Ile Cys Val Asn Asp Gly Ala Gly Ser His His Cys		
	355	360
Glu Cys Phe Glu Gly Tyr Thr Leu Asn Ala Asp Lys Lys Thr Cys Ser		
	370	375
Val Arg Asn Lys Cys Ala Leu Gly Thr His Gly Cys Gln His Ile Cys		
385	390	395
Val Ser Asp Gly Ala Val Ala Tyr His Cys Asp Cys Phe Pro Gly Tyr		
	405	410
Thr Leu Asn Asp Asp Lys Lys Thr Cys Ser Asp Ile Glu Glu Ala Arg		
	420	425
Ser Leu Ile Ser Ile Glu Asp Ala Cys Gly Cys Gly Ala Thr Leu Ala		
	435	440
Phe Gln Glu Lys Val Ser Ser His Leu Gln Lys Leu Asn Thr Lys Leu		
	450	455
Asp Asn Ile Leu Lys Lys Leu Lys Val Thr Glu Tyr Gly Gln Val His		
465	470	475
Arg		480

<210> 37
 <211> 1507
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 37
 Met Val Ser Leu Ile Asp Thr Ile Glu Ala Ala Ala Glu Lys Gln Lys
 1 5 10
 Gln Ser Gln Ala Val Val Thr Asn Thr Ser Ala Ser Ser Ser Cys
 20 25 30
 Ser Ser Ser Phe Ser Ser Ser Pro Pro Ser Ser Ser Val Gly Ser Pro
 35 40 45
 Ser Pro Gly Ala Pro Lys Thr Asn Leu Thr Ala Ser Gly Lys Pro Lys
 50 55 60
 Glu Lys Arg Arg Asn Asn Glu Lys Arg Lys Glu Lys Ser Arg Asp Ala
 65 70 75 80
 Ala Arg Cys Arg Arg Ser Lys Glu Thr Glu Ile Phe Met Glu Leu Ser
 85 90 95
 Ala Ala Leu Pro Leu Lys Thr Asp Asp Val Asn Gln Leu Asp Lys Ala
 100 105 110
 Ser Val Met Arg Ile Thr Ile Ala Phe Leu Lys Ile Arg Glu Met Leu
 115 120 125
 Gln Phe Val Pro Ser Leu Arg Asp Cys Asn Asp Asp Ile Lys Gln Asp
 130 135 140
 Ile Glu Thr Ala Glu Asp Gln Gln Glu Val Lys Pro Lys Leu Glu Val
 145 150 155 160

Gly	Thr	Glu	Asp	Trp	Leu	Asn	Gly	Ala	Glu	Ala	Arg	Glu	Leu	Leu	Lys
			165						170						
Gln	Thr	Met	Asp	Gly	Phe	Leu	Leu	Val	Leu	Ser	His	Glu	Gly	Asp	Ile
			180					185					190		
Thr	Tyr	Val	Ser	Glu	Asn	Val	Val	Glu	Tyr	Leu	Gly	Ile	Thr	Lys	Ile
		195					200					205			
Asp	Thr	Leu	Gly	Gln	Gln	Ile	Trp	Glu	Tyr	Ser	His	Gln	Cys	Asp	His
	210					215					220				
Ala	Glu	Ile	Lys	Glu	Ala	Leu	Ser	Leu	Lys	Arg	Glu	Leu	Ala	Gln	Lys
225					230					235					240
Val	Lys	Asp	Glu	Pro	Gln	Gln	Asn	Ser	Gly	Val	Ser	Thr	His	His	Arg
				245					250					255	
Asp	Leu	Phe	Val	Arg	Leu	Lys	Cys	Thr	Leu	Thr	Ser	Arg	Gly	Arg	Ser
			260					265					270		
Ile	Asn	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Val	Ile	His	Ile	Thr	Gly	His
		275					280					285			
Leu	Val	Val	Asn	Ala	Lys	Gly	Glu	Arg	Leu	Leu	Met	Ala	Ile	Gly	Arg
	290					295					300				
Pro	Ile	Pro	His	Pro	Ser	Asn	Ile	Glu	Ile	Pro	Leu	Gly	Thr	Ser	Thr
305					310					315					320
Phe	Leu	Thr	Lys	His	Ser	Leu	Asp	Met	Arg	Phe	Thr	Tyr	Val	Asp	Asp
				325					330					335	
Lys	Met	His	Asp	Leu	Leu	Gly	Tyr	Ser	Pro	Lys	Asp	Leu	Leu	Asp	Thr
			340					345					350		
Ser	Leu	Phe	Ser	Cys	Gln	His	Gly	Ala	Asp	Ser	Glu	Arg	Leu	Met	Ala
		355					360					365			
Thr	Phe	Lys	Ser	Val	Leu	Ser	Lys	Gly	Gln	Gly	Glu	Thr	Ser	Arg	Tyr
	370					375					380				
Arg	Phe	Leu	Gly	Lys	Tyr	Gly	Gly	Tyr	Cys	Trp	Ile	Leu	Ser	Gln	Ala
385					390					395					400
Thr	Ile	Val	Tyr	Asp	Lys	Leu	Lys	Pro	Gln	Ser	Val	Val	Cys	Val	Asn
				405					410					415	
Tyr	Val	Ile	Ser	Asn	Leu	Glu	Asn	Lys	His	Glu	Ile	Tyr	Ser	Leu	Ala
			420					425					430		
Gln	Gln	Thr	Ala	Ala	Ser	Glu	Gln	Lys	Glu	Gln	His	His	Gln	Ala	Ala
		435					440					445			
Glu	Thr	Glu	Lys	Glu	Pro	Glu	Lys	Ala	Ala	Asp	Pro	Glu	Ile	Ile	Ala
	450					455					460				
Gln	Glu	Thr	Lys	Glu	Thr	Val	Asn	Thr	Pro	Ile	His	Thr	Ser	Glu	Leu
465					470					475					480
Gln	Ala	Lys	Pro	Leu	Gln	Leu	Glu	Ser	Glu	Lys	Ala	Glu	Lys	Thr	Ile
				485					490					495	
Glu	Glu	Thr	Lys	Thr	Ile	Ala	Thr	Ile	Pro	Pro	Val	Thr	Ala	Thr	Ser
			500					505					510		
Thr	Ala	Asp	Gln	Ile	Lys	Gln	Leu	Pro	Glu	Ser	Asn	Pro	Tyr	Lys	Gln
		515					520					525			
Ile	Leu	Gln	Ala	Glu	Leu	Leu	Ile	Lys	Arg	Glu	Asn	His	Ser	Pro	Gly
	530					535					540				
Pro	Arg	Thr	Ile	Thr	Ala	Gln	Leu	Leu	Ser	Gly	Ser	Ser	Ser	Gly	Leu
545					550					555					560
Arg	Pro	Glu	Glu	Lys	Arg	Pro	Lys	Ser	Val	Thr	Ala	Ser	Val	Leu	Arg
				565					570					575	
Pro	Ser	Pro	Ala	Pro	Pro	Leu	Thr	Pro	Pro	Pro	Thr	Ala	Val	Leu	Cys
			580					585					590		
Lys	Lys	Thr	Pro	Leu	Gly	Val	Glu	Pro	Asn	Leu	Pro	Pro	Thr	Thr	Thr
		595					600					605			
Ala	Thr	Ala	Ala	Ile	Ile	Ser	Ser	Ser	Asn	Gln	Gln	Gln	Ile	Ala	
	610					615					620				
Gln	Gln	Thr	Gln	Leu	Gln	Asn	Pro	Gln	Gln	Pro	Ala	Gln	Asp	Met	Ser
625					630					635					640
Lys	Gly	Phe	Cys	Ser	Leu	Phe	Ala	Asp	Asp	Gly	Arg	Gly	Leu	Thr	Met
				645					650					655	

Leu	Lys	Glu	Glu	Pro	Asp	Asp	Leu	Ser	His	His	Leu	Ala	Ser	Thr	Asn	
			660					665					670			
Cys	Ile	Gln	Leu	Asp	Glu	Met	Thr	Pro	Phe	Ser	Asp	Met	Leu	Val	Gly	
		675					680					685				
Leu	Met	Gly	Thr	Cys	Leu	Leu	Pro	Glu	Asp	Ile	Asn	Ser	Leu	Asp	Ser	
	690					695					700					
Thr	Thr	Cys	Ser	Thr	Thr	Ala	Ser	Gly	Gln	His	Tyr	Gln	Ser	Pro	Ser	
705					710					715					720	
Ser	Ser	Ser	Thr	Ser	Ala	Pro	Ser	Asn	Thr	Ser	Ser	Ser	Asn	Asn	Ser	
				725					730					735		
Tyr	Ala	Asn	Ser	Pro	Leu	Ser	Pro	Leu	Thr	Pro	Asn	Ser	Thr	Ala	Thr	
			740					745					750			
Ala	Ser	Asn	Pro	Ser	His	Gln	Gln	Gln	Gln	Gln	His	His	Asn	Gln	Gln	
		755					760					765				
Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	His	His	Pro	Gln	His	His	Asp	Asn	
	770					775					780					
Ser	Asn	Ser	Ser	Ser	Asn	Ile	Asp	Pro	Leu	Phe	Asn	Tyr	Arg	Glu	Glu	
785					790					795					800	
Ser	Asn	Asp	Thr	Ser	Cys	Ser	Gln	His	Leu	His	Ser	Pro	Ser	Ile	Thr	
				805					810					815		
Ser	Lys	Ser	Pro	Glu	Asp	Ser	Ser	Leu	Pro	Ser	Leu	Cys	Ser	Pro	Asn	
			820					825					830			
Ser	Leu	Thr	Gln	Glu	Asp	Asp	Phe	Ser	Phe	Glu	Ala	Phe	Ala	Met	Arg	
		835					840					845				
Ala	Pro	Tyr	Ile	Pro	Ile	Asp	Asp	Asp	Met	Pro	Leu	Leu	Thr	Glu	Thr	
	850					855					860					
Asp	Leu	Met	Trp	Cys	Pro	Pro	Glu	Asp	Leu	Gln	Thr	Met	Val	Pro	Lys	
865					870					875					880	
Glu	Ile	Asp	Ala	Ile	Gln	Gln	Gln	Leu	Gln	Gln	Leu	Gln	Gln	Gln	His	
				885				890						895		
His	Gln	Gln	Tyr	Ala	Gly	Asn	Thr	Gly	Tyr	Gln	Gln	Gln	Gln	Gln	Gln	
		900						905					910			
Pro	Gln	Leu	Gln	Gln	Gln	His	Phe	Ser	Asn	Ser	Leu	Cys	Ser	Ser	Pro	
		915					920					925				
Ala	Ser	Thr	Val	Ser	Ser	Leu	Ser	Pro	Ser	Pro	Val	Gln	Gln	His	His	
		930				935					940					
Gln	Gln	Gln	Gln	Ala	Ala	Val	Phe	Thr	Ser	Asp	Ser	Ser	Glu	Leu	Ala	
945					950					955					960	
Ala	Leu	Leu	Cys	Gly	Ser	Gly	Asn	Gly	Thr	Leu	Ser	Ile	Leu	Ala	Gly	
				965					970					975		
Ser	Gly	Val	Thr	Val	Ala	Glu	Glu	Cys	Asn	Glu	Arg	Leu	Gln	Gln	His	
			980					985					990			
Gln	Gln	Gln	Gln	Gln	Gln	Thr	Ser	Gly	Asn	Glu	Phe	Arg	Thr	Phe	Gln	
		995				1000						1005				
Gln	Leu	Gln	Gln	Glu	Leu	Gln	Leu	Gln	Glu	Glu	Gln	Gln	Gln	Arg	Gln	
	1010					1015					1020					
Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Leu	Leu	
1025					1030					1035					1040	
Ser	Leu	Asn	Ile	Glu	Cys	Lys	Lys	Glu	Lys	Tyr	Asp	Val	Gln	Met	Gly	
				1045					1050					1055		
Gly	Ser	Leu	Cys	His	Pro	Met	Glu	Asp	Ala	Phe	Glu	Asn	Asp	Tyr	Ser	
			1060					1065					1070			
Lys	Asp	Ser	Ala	Asn	Leu	Asp	Cys	Trp	Asp	Leu	Ile	Gln	Met	Gln	Val	
		1075					1080					1085				
Val	Asp	Thr	Glu	Pro	Val	Ser	Pro	Asn	Ala	Ala	Ser	Pro	Thr	Pro	Cys	
	1090					1095						1100				
Lys	Val	Ser	Ala	Ile	Gln	Leu	Leu	Gln	Gln	Gln	Gln	Gln	Leu	Gln	Gln	
1105					1110					1115					1120	
Gln	Gln	Gln	Gln	Gln	Gln	Asn	Ile	Ile	Leu	Asn	Ala	Val	Pro	Leu	Ile	
				1125					1130					1135		
Thr	Ile	Gln	Asn	Asn	Lys	Glu	Leu	Met	Gln	Gln	Gln	Gln	Gln	Gln	Gln	
			1140					1145					1150			

Gln Gln Gln Gln Gln Glu Gln Leu Gln Gln Pro Ala Ile Lys Leu Leu
 1155 1160 1165
 Asn Gly Ala Ser Ile Ala Pro Val Asn Thr Lys Ala Thr Ile Arg Leu
 1170 1175 1180
 Val Glu Ser Lys Pro Pro Thr Thr Thr Gln Ser Arg Met Ala Lys Val
 1185 1190 1195 1200
 Asn Leu Val Pro Gln Gln Gln Gln His Gly Asn Lys Arg His Leu Asn
 1205 1210 1215
 Ser Ala Thr Gly Ala Gly Asn Pro Val Glu Ser Lys Arg Leu Lys Ser
 1220 1225 1230
 Gly Thr Leu Cys Leu Asp Val Gln Ser Pro Gln Leu Leu Gln Gln Leu
 1235 1240 1245
 Ile Gly Lys Asp Pro Ala Gln Gln Gln Thr Gln Ala Ala Lys Arg Ala
 1250 1255 1260
 Gly Ser Glu Arg Trp Gln Leu Ser Ala Glu Ser Lys Gln Gln Lys Gln
 1265 1270 1275 1280
 Gln Gln Gln Gln Ser Asn Ser Val Leu Lys Asn Leu Leu Val Ser Gly
 1285 1290 1295
 Arg Asp Asp Asp Asp Ser Glu Ala Met Ile Ile Asp Glu Asp Asn Ser
 1300 1305 1310
 Leu Val Gln Pro Ile Pro Leu Gly Lys Tyr Gly Leu Pro Leu His Cys
 1315 1320 1325
 His Thr Ser Thr Ser Ser Val Leu Arg Asp Tyr His Asn Asn Pro Leu
 1330 1335 1340
 Ile Ser Gly Thr Asn Phe Gln Leu Ser Pro Val Phe Gly Gly Ser Asp
 1345 1350 1355 1360
 Ser Ser Gly Gly Asp Gly Glu Thr Gly Ser Val Val Ser Leu Asp Asp
 1365 1370 1375
 Ser Val Pro Pro Gly Leu Thr Ala Cys Asp Thr Asp Ala Ser Ser Asp
 1380 1385 1390
 Ser Gly Ile Asp Glu Asn Ser Leu Met Asp Gly Ala Ser Gly Ser Pro
 1395 1400 1405
 Arg Lys Arg Leu Ser Ser Thr Ser Asn Ser Thr Asn Gln Ala Glu Ser
 1410 1415 1420
 Ala Pro Pro Ala Leu Asp Val Glu Thr Pro Val Thr Gln Lys Ser Val
 1425 1430 1435 1440
 Glu Glu Glu Phe Glu Gly Gly Gly Ser Gly Ser Asn Ala Pro Ser Arg
 1445 1450 1455
 Lys Thr Ser Ile Ser Phe Leu Asp Ser Ser Asn Pro Leu Leu His Thr
 1460 1465 1470
 Pro Ala Met Met Asp Leu Val Asn Asp Asp Tyr Ile Met Gly Glu Gly
 1475 1480 1485
 Gly Phe Glu Phe Ser Asp Asn Gln Leu Glu Gln Val Leu Gly Trp Pro
 1490 1495 1500
 Glu Ile Ala
 1505

<210> 38
 <211> 879
 <212> PRT
 <213> Homo sapiens

<400> 38
 Met Ala Gly Gly Gly Gly Asp Leu Ser Thr Arg Arg Leu Asn Glu Cys
 1 5 10 15
 Ile Ser Pro Val Ala Asn Glu Met Asn His Leu Pro Ala His Ser His
 20 25 30
 Asp Leu Gln Arg Met Phe Thr Glu Asp Gln Gly Val Asp Asp Arg Leu
 35 40 45
 Leu Tyr Asp Ile Val Phe Lys His Phe Lys Arg Asn Lys Val Glu Ile
 50 55 60
 Ser Asn Ala Ile Lys Lys Thr Phe Pro Phe Leu Glu Gly Leu Arg Asp

65					70					75				80
Arg	Asp	Leu	Ile	Thr	Asn	Lys	Met	Phe	Glu	Asp	Ser	Gln	Asp	Ser Cys
				85					90					95
Arg	Asn	Leu	Val	Pro	Val	Gln	Arg	Val	Val	Tyr	Asn	Val	Leu	Ser Glu
			100					105					110	
Leu	Glu	Lys	Thr	Phe	Asn	Leu	Pro	Val	Leu	Glu	Ala	Leu	Phe	Ser Asp
		115					120					125		
Val	Asn	Met	Gln	Glu	Tyr	Pro	Asp	Leu	Ile	His	Ile	Tyr	Lys	Gly Phe
	130					135				140				
Glu	Asn	Val	Ile	His	Asp	Lys	Leu	Pro	Leu	Gln	Glu	Ser	Glu	Glu Glu
145					150					155				160
Glu	Arg	Glu	Glu	Arg	Ser	Gly	Leu	Gln	Leu	Ser	Leu	Glu	Gln	Gly Thr
				165				170						175
Gly	Glu	Asn	Ser	Phe	Arg	Ser	Leu	Thr	Trp	Pro	Pro	Ser	Gly	Ser Pro
		180						185					190	
Ser	His	Ala	Gly	Thr	Thr	Pro	Pro	Glu	Asn	Gly	Leu	Ser	Glu	His Pro
		195				200						205		
Cys	Glu	Thr	Glu	Gln	Ile	Asn	Ala	Lys	Arg	Lys	Asp	Thr	Thr	Ser Asp
	210					215					220			
Lys	Asp	Asp	Ser	Leu	Gly	Ser	Gln	Gln	Thr	Asn	Glu	Gln	Cys	Ala Gln
225					230					235				240
Lys	Ala	Glu	Pro	Thr	Glu	Ser	Cys	Glu	Gln	Ile	Ala	Val	Gln	Val Asn
				245					250					255
Asn	Gly	Asp	Ala	Gly	Arg	Glu	Met	Pro	Cys	Pro	Leu	Pro	Cys	Asp Glu
			260					265					270	
Glu	Ser	Pro	Glu	Ala	Glu	Leu	His	Asn	His	Gly	Ile	Gln	Ile	Asn Ser
		275					280					285		
Cys	Ser	Val	Arg	Leu	Val	Asp	Ile	Lys	Lys	Glu	Lys	Pro	Phe	Ser Asn
	290					295					300			
Ser	Lys	Val	Glu	Cys	Gln	Ala	Gln	Ala	Arg	Thr	His	His	Asn	Gln Ala
305					310					315				320
Ser	Asp	Ile	Ile	Val	Ile	Ser	Ser	Glu	Asp	Ser	Glu	Gly	Ser	Thr Asp
				325					330					335
Val	Asp	Glu	Pro	Leu	Glu	Val	Phe	Ile	Ser	Ala	Pro	Arg	Ser	Glu Pro
			340					345					350	
Val	Ile	Asn	Asn	Asp	Asn	Pro	Leu	Glu	Ser	Asn	Asp	Glu	Lys	Glu Gly
		355					360					365		
Gln	Glu	Ala	Thr	Cys	Ser	Arg	Pro	Gln	Ile	Val	Pro	Glu	Pro	Met Asp
					375						380			
Phe	Arg	Lys	Leu	Ser	Thr	Phe	Arg	Glu	Ser	Phe	Lys	Lys	Arg	Val Ile
385					390					395				400
Gly	Gln	Asp	His	Asp	Phe	Ser	Glu	Ser	Ser	Glu	Glu	Glu	Ala	Pro Ala
				405				410						415
Glu	Ala	Ser	Ser	Gly	Ala	Leu	Arg	Ser	Lys	His	Gly	Glu	Lys	Ala Pro
			420					425					430	
Met	Thr	Ser	Arg	Ser	Thr	Ser	Thr	Trp	Arg	Ile	Pro	Ser	Arg	Lys Arg
		435					440					445		
Arg	Phe	Ser	Ser	Ser	Asp	Phe	Ser	Asp	Leu	Ser	Asn	Gly	Glu	Glu Leu
	450					455					460			
Gln	Glu	Thr	Cys	Ser	Ser	Ser	Leu	Arg	Arg	Gly	Ser	Gly	Ser	Gln Pro
465					470					475				480
Gln	Glu	Pro	Glu	Asn	Lys	Lys	Cys	Ser	Cys	Val	Met	Cys	Phe	Pro Lys
				485					490					495
Gly	Val	Pro	Arg	Ser	Gln	Glu	Ala	Arg	Thr	Glu	Ser	Ser	Gln	Ala Ser
			500					505					510	
Asp	Met	Met	Asp	Thr	Met	Asp	Val	Glu	Asn	Asn	Ser	Thr	Leu	Glu Lys
		515					520					525		
His	Ser	Gly	Lys	Arg	Arg	Lys	Lys	Arg	Arg	His	Arg	Ser	Lys	Val Asn
	530					535					540			
Gly	Leu	Gln	Arg	Gly	Arg	Lys	Lys	Asp	Arg	Pro	Arg	Lys	His	Leu Thr
545					550					555				560
Leu	Asn	Asn	Lys	Val	Gln	Lys	Lys	Arg	Trp	Gln	Gln	Arg	Gly	Arg Lys

				565					570					575			
Ala	Asn	Thr	Arg	Pro	Leu	Lys	Arg	Arg	Arg	Lys	Arg	Gly	Pro	Arg	Ile		
			580					585					590				
Pro	Lys	Asp	Glu	Asn	Ile	Asn	Phe	Lys	Gln	Ser	Glu	Leu	Pro	Val	Thr		
		595					600					605					
Cys	Gly	Glu	Val	Lys	Gly	Thr	Leu	Tyr	Lys	Glu	Arg	Phe	Lys	Gln	Gly		
	610				615						620						
Thr	Ser	Lys	Lys	Cys	Ile	Gln	Ser	Glu	Asp	Lys	Lys	Trp	Phe	Thr	Pro		
	625				630					635					640		
Arg	Glu	Phe	Glu	Ile	Glu	Gly	Asp	Arg	Gly	Ala	Ser	Lys	Asn	Trp	Lys		
				645					650					655			
Leu	Ser	Ile	Arg	Cys	Gly	Gly	Tyr	Thr	Leu	Lys	Val	Leu	Met	Glu	Asn		
			660					665					670				
Lys	Phe	Leu	Pro	Glu	Pro	Pro	Ser	Thr	Arg	Lys	Lys	Arg	Ile	Leu	Glu		
		675					680					685					
Ser	His	Asn	Asn	Thr	Leu	Val	Asp	Pro	Cys	Glu	Glu	His	Lys	Lys	Lys		
	690					695					700						
Asn	Pro	Asp	Ala	Ser	Val	Lys	Phe	Ser	Glu	Phe	Leu	Lys	Lys	Cys	Ser		
	705				710					715				720			
Glu	Thr	Trp	Lys	Thr	Ile	Phe	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp		
				725					730					735			
Met	Ala	Lys	Ala	Asp	Lys	Ala	His	Tyr	Glu	Arg	Glu	Met	Lys	Thr	Tyr		
			740					745					750				
Ile	Pro	Pro	Lys	Gly	Glu	Lys	Lys	Lys	Lys	Phe	Lys	Asp	Pro	Asn	Ala		
		755					760					765					
Pro	Lys	Arg	Pro	Pro	Leu	Ala	Phe	Phe	Leu	Phe	Cys	Ser	Glu	Tyr	Arg		
	770					775					780						
Pro	Lys	Ile	Lys	Gly	Glu	His	Pro	Gly	Leu	Ser	Ile	Asp	Asp	Val	Val		
	785				790					795				800			
Lys	Lys	Leu	Ala	Gly	Met	Trp	Asn	Asn	Thr	Ala	Ala	Ala	Asp	Lys	Gln		
				805					810					815			
Phe	Tyr	Glu	Lys	Lys	Ala	Ala	Lys	Leu	Lys	Glu	Lys	Tyr	Lys	Lys	Asp		
			820					825					830				
Ile	Ala	Ala	Tyr	Arg	Ala	Lys	Gly	Lys	Pro	Asn	Ser	Ala	Lys	Lys	Arg		
		835					840					845					
Val	Val	Lys	Ala	Glu	Lys	Ser	Lys	Lys	Lys	Lys	Glu	Glu	Glu	Glu	Asp		
	850					855					860						
Glu	Glu	Asp	Glu	Gln	Glu	Glu	Glu	Asn	Glu	Glu	Asp	Asp	Asp	Lys			
	865				870					875							

<210> 39
 <211> 284
 <212> PRT
 <213> Gallus gallus

<400> 39
 Met Glu Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
 1 5 10 15
 Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala
 20 25 30
 Glu Asp Arg Cys Lys Gln Leu Glu Glu Gln Gln Gly Leu Gln Lys
 35 40 45
 Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val
 50 55 60
 Lys Glu Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp
 65 70 75 80
 Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
 85 90 95
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
 100 105 110
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
 115 120 125

Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
	130					135					140				
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Val	Leu	Glu	Gly	Glu	Leu
				165					170					175	
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Arg	Val	Arg	Gln
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Arg	Thr	Met	Asp	Gln	Ser	Leu	Lys	Ser	Leu	Ile
		195					200					205			
Ala	Ser	Glu	Glu	Glu	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Leu	Leu	Gly	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Glu	Ser	Leu	Ala	Ser	Ala	Lys	Glu	Glu	Asn	Val	Gly	Ile	His	Gln
			260					265					270		
Val	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Leu				
		275					280								

<210> 40
 <211> 284
 <212> PRT
 <213> Homo sapiens

<400> 40															
Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Asp	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ser	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70				75					80	
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135						140			
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Arg	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				

275

280

<210> 41
 <211> 284
 <212> PRT
 <213> Gallus gallus

<400> 41
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
 1 5 10 15
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala
 20 25 30
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys
 35 40 45
 Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu
 50 55 60
 His Lys Ser Glu Asp Ser Leu Leu Ser Ala Glu Glu Asn Ala Ala Lys
 65 70 75 80
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
 85 90 95
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
 100 105 110
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
 115 120 125
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln
 130 135 140
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg
 145 150 155 160
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Leu Glu Gly Asp Leu
 165 170 175
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu
 180 185 190
 Leu Glu Glu Glu Leu Lys Leu Val Thr Asn Glu Ala Lys Ser Leu Glu
 195 200 205
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu
 210 215 220
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
 225 230 235 240
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu
 245 250 255
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln
 260 265 270
 Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met
 275 280

<210> 42
 <211> 248
 <212> PRT
 <213> Gallus gallus

<400> 42
 Met Ala Gly Ile Ser Ser Ile Asp Ala Val Lys Lys Lys Ile Gln Ser
 1 5 10 15
 Leu Gln Gln Val Ala Asp Glu Ala Glu Glu Arg Ala Glu His Leu Gln
 20 25 30
 Arg Glu Ala Asp Ala Glu Arg Gln Ala Arg Glu Arg Ala Glu Ala Glu
 35 40 45
 Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp
 50 55 60
 Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala
 65 70 75 80
 Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn

				85					90					95			
Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln	Glu	Met	Gln	Leu		
			100					105					110				
Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg	Lys	Tyr	Glu	Glu		
		115					120					125					
Val	Ala	Arg	Lys	Leu	Val	Val	Leu	Glu	Gly	Glu	Leu	Glu	Arg	Ser	Glu		
	130					135					140						
Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Arg	Val	Arg	Gln	Leu	Glu	Glu	Glu		
145					150					155					160		
Leu	Arg	Thr	Met	Asp	Gln	Ser	Leu	Lys	Ser	Leu	Ile	Ala	Ser	Glu	Glu		
			165					170						175			
Glu	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Leu	Leu		
		180					185						190				
Gly	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg		
	195						200					205					
Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu	Glu	Glu	Ser	Leu		
	210					215					220						
Ala	Ser	Ala	Lys	Glu	Glu	Asn	Val	Gly	Ile	His	Gln	Val	Leu	Asp	Gln		
225					230					235					240		
Thr	Leu	Leu	Glu	Leu	Asn	Asn	Leu										
				245													

<210> 43
 <211> 284
 <212> PRT
 <213> Homo sapiens

<400> 43																	
Met	Glu	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu		
1				5				10					15				
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Glu	Gln	Lys	Gln	Ala		
		20					25					30					
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Ala	Ala	Met	Gln	Lys		
	35					40					45						
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu		
	50				55					60							
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Ala	Asp		
65					70				75					80			
Ala	Glu	Ala	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu		
			85					90						95			
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys		
		100					105					110					
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys		
	115					120					125						
Val	Ile	Glu	Asn	Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln		
	130					135					140						
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg		
145					150					155				160			
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu		
			165					170						175			
Glu	Arg	Thr	Glu	Glu	Arg	Ala	Glu	Leu	Ala	Glu	Ser	Lys	Cys	Ser	Glu		
	180						185					190					
Leu	Glu	Glu	Glu	Leu	Lys	Asn	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu		
	195					200					205						
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu		
	210					215					220						
Ile	Lys	Ile	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu		
225					230					235				240			
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu		
			245					250					255				
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu		
		260						265					270				

Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile
 275 280

<210> 44
 <211> 245
 <212> PRT
 <213> Gallus gallus

<400> 44
 Met Ala Ala Leu Ser Ser Leu Glu Ala Val Arg Lys Lys Ile Arg Ser
 1 5 10 15
 Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Lys Leu Gln
 20 25 30
 Arg Glu Val Asp Gln Glu Arg Ala Leu Arg Glu Glu Ala Glu Ser Glu
 35 40 45
 Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp
 50 55 60
 Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala
 65 70 75 80
 Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn
 85 90 95
 Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu
 100 105 110
 Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg Lys Tyr Glu Glu
 115 120 125
 Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu Glu Arg Ala Glu
 130 135 140
 Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu Leu Glu Glu Glu
 145 150 155 160
 Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu Ala Gln Ala Glu
 165 170 175
 Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu
 180 185 190
 Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg
 195 200 205
 Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Asp Gln Leu
 210 215 220
 Tyr Gln Gln Leu Glu Gln Asn Ser Arg Leu Thr Asn Glu Leu Lys Leu
 225 230 235 240
 Ala Leu Asn Glu Asp
 245

<210> 45
 <211> 281
 <212> PRT
 <213> Gallus gallus

<400> 45
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
 1 5 10 15
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala
 20 25 30
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys
 35 40 45
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu
 50 55 60
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp
 65 70 75 80
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
 85 90 95
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
 100 105 110

Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
			195				200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Gln	Leu	Tyr	Gln	Gln	Leu	Glu	Gln	Asn	Ser	Arg	Leu	Thr	Asn
			260					265					270		
Glu	Leu	Lys	Leu	Ala	Leu	Asn	Glu	Asp							
		275					280								

<210> 46
 <211> 284
 <212> PRT
 <213> Brachydanio rerio

<400> 46

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Thr	Asp	Lys	Lys	Ala	Ala
		20						25					30		
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Asp	Leu	Val	Ala	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Ala	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Gly	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Val	Glu	Gly	Glu	Leu
				165					170					175	
Glu	Arg	Thr	Glu	Glu	Arg	Ala	Glu	Leu	Asn	Glu	Gly	Lys	Cys	Ser	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Met	Lys	Ser	Leu	Glu
			195				200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Ala	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu

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<210> 47
<211> 284
<212> PRT
<213> Coturnix coturnix japonica
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<210> 48
<211> 284
<212> PRT
<213> Mus musculus
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-67-

65					70					75					80
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
	195						200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
	275						280								

<210> 49
 <211> 284
 <212> PRT
 <213> Rana temporaria

<400> 49

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gly	Ala
			20					25					30		
Glu	Asp	Lys	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Met	Gln	Lys
		35					40					45			
Lys	Met	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70				75						80
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Ile	Glu	Leu	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
	195						200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				

Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Thr	Val	Ala	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 50
 <211> 284
 <212> PRT
 <213> *Rattus norvegicus*

<400> 50

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Asp	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ser	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70				75						80
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
145					150				155						160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
				165				170						175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230				235						240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Lys	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 51
 <211> 284
 <212> PRT
 <213> *Xenopus laevis*

<400> 51

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gly	Ala
			20					25					30		

Glu	Asp	Lys	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ser	Asp	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Gly	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ser	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
		210				215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Thr	Val	Ala	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 52
 <211> 284
 <212> PRT
 <213> Gallus gallus

<400> 52															
Met	Glu	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala
			20					25					30		
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Gln	Gln	Gly	Leu	Gln	Lys	
		35					40				45				
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val
	50					55					60				
Lys	Glu	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Ala	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
	130					135					140				
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Val	Leu	Glu	Gly	Glu	Leu
				165					170					175	
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Lys	Cys	Gly	Asp

			180					185					190				
Leu	Glu	Glu	Glu	Leu	Lys	Ile	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu		
		195					200					205					
Ala	Gln	Ala	Asp	Lys	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu		
	210					215					220						
Ile	Lys	Leu	Leu	Gly	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu		
225				230					235						240		
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu		
			245						250					255			
Glu	Asp	Glu	Val	Tyr	Ala	Gln	Lys	Met	Lys	Tyr	Lys	Ala	Ile	Ser	Glu		
		260						265					270				
Glu	Leu	Asp	Asn	Ala	Leu	Asn	Asp	Ile	Thr	Ser	Leu						
	275						280										

<210> 53
 <211> 284
 <212> PRT
 <213> Homo sapiens

<400> 53																	
Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu		
1				5				10						15			
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala		
		20					25						30				
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Gln	Gln	Ala	Leu	Gln	Lys			
	35					40				45							
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val		
	50				55					60							
Lys	Glu	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp		
65				70					75					80			
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu		
			85					90					95				
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys		
		100					105						110				
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys		
	115					120						125					
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln		
	130				135						140						
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ser	Asp	Arg		
145				150					155					160			
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Leu	Glu	Gly	Glu	Leu		
			165					170						175			
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Lys	Cys	Gly	Asp		
		180					185						190				
Leu	Glu	Glu	Glu	Leu	Lys	Ile	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu		
	195					200						205					
Ala	Gln	Ala	Asp	Lys	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu		
	210					215					220						
Ile	Lys	Leu	Leu	Glu	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu		
225				230					235						240		
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu		
			245					250						255			
Glu	Asp	Glu	Val	Tyr	Ala	Gln	Lys	Met	Lys	Tyr	Lys	Ala	Ile	Ser	Glu		
		260					265						270				
Glu	Leu	Asp	Asn	Ala	Leu	Asn	Asp	Ile	Thr	Ser	Leu						
	275						280										

<210> 54
 <211> 284
 <212> PRT
 <213> Mus musculus

<400> 54

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala
			20					25					30		
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Glu	Gln	Gln	Ala	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
	130					135					140				
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ser	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Leu	Glu	Gly	Glu	Leu
				165					170					175	
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Lys	Cys	Gly	Asp
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Ile	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
	195						200					205			
Ala	Gln	Ala	Asp	Lys	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Leu	Leu	Glu	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Val	Tyr	Ala	Gln	Lys	Met	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	Asn	Ala	Leu	Asn	Asp	Ile	Thr	Ser	Leu				
		275					280								

<210> 55
 <211> 284
 <212> PRT
 <213> Sus scrofa

<400> 55

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Asp	Glu	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Asp	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ser	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Ala	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Phe	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130						135					140			

Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 56
 <211> 284
 <212> PRT
 <213> Gallus gallus

<400> 56

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys
		35				40					45				
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ser	Leu
	50				55						60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Asp	Lys	Lys	Ala	Thr	Asp
65					70				75					80	
Ala	Glu	Ser	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Gln	Val	Arg	Gln
			180					185					190		
Leu	Glu	Glu	Gln	Leu	Arg	Ile	Met	Asp	Gln	Thr	Leu	Lys	Ala	Leu	Met
		195					200					205			
Ala	Ala	Glu	Asp	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln
			260					265					270		
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met				
		275					280								

<210> 57
 <211> 284
 <212> PRT
 <213> Coturnix coturnix japonica

<400> 57
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
 1 5 10 15
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Asp Lys Lys Ala Ala
 20 25 30
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys
 35 40 45
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu
 50 55 60
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp
 65 70 75 80
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
 85 90 95
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
 100 105 110
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
 115 120 125
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln
 130 135 140
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg
 145 150 155 160
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu
 165 170 175
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu
 180 185 190
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu
 195 200 205
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu
 210 215 220
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
 225 230 235 240
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu
 245 250 255
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln
 260 265 270
 Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met
 275 280

<210> 58
 <211> 248
 <212> PRT
 <213> Xenopus laevis

<400> 58
 Met Ala Gly Ile Thr Ser Leu Glu Ala Val Lys Arg Lys Ile Lys Cys
 1 5 10 15
 Leu Gln Asp Gln Ala Asp Glu Ala Glu Glu Arg Ala Glu Lys Leu Gln
 20 25 30
 Arg Glu Arg Asp Met Glu Arg Lys Leu Arg Glu Ala Ala Glu Gly Asp
 35 40 45
 Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Leu Asp
 50 55 60
 Arg Ala Gln Glu Arg Leu Ser Thr Ala Leu Gln Lys Leu Glu Glu Ala
 65 70 75 80
 Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn
 85 90 95
 Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln Glu Ile Gln Leu

<210> 60
 <211> 284
 <212> PRT
 <213> Coturnix coturnix japonica

<400> 60
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
 1 5 10 15
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala
 20 25 30
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys
 35 40 45
 Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu
 50 55 60
 His Lys Ser Glu Asp Ser Leu Leu Ser Ala Glu Ile Ala Ala Lys
 65 70 75 80
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
 85 90 95
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
 100 105 110
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
 115 120 125
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln
 130 135 140
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg
 145 150 155 160
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu
 165 170 175
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu
 180 185 190
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu
 195 200 205
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu
 210 215 220
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
 225 230 235 240
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu
 245 250 255
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln
 260 265 270
 Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met
 275 280

<210> 61
 <211> 227
 <212> PRT
 <213> Homo sapiens

<400> 61
 Cys Arg Leu Arg Ile Phe Leu Arg Thr Ala Ser Ser Glu His Leu His
 1 5 10 15
 Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp Val Ala Ser Leu Asn
 20 25 30
 Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp Arg Ala Gln Glu Arg
 35 40 45
 Leu Ala Thr Val Leu Gln Lys Leu Glu Glu Ala Glu Lys Ala Ala Asp
 50 55 60
 Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser Arg Ala Gln Lys Asp
 65 70 75 80
 Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu Lys Glu Ala Lys His
 85 90 95
 Ile Ala Glu Asp Ala Asp Arg Lys Tyr Glu Glu Val Ala Arg Lys Leu

Val	Ile	Ile	100	Glu	Ser	Asp	Leu	Glu	105	Arg	Ala	Glu	Glu	Arg	110	Ala	Glu	Leu
		115						120						125				
Ser	Glu	Gly	Gln	Val	Arg	Gln	Leu	Glu	Glu	Gln	Leu	Arg	Ile	Met	Asp			
	130					135					140							
Ser	Asp	Leu	Glu	Ser	Ile	Asn	Ala	Ala	Glu	Asp	Lys	Tyr	Ser	Gln	Lys			
145					150					155					160			
Glu	Asp	Arg	Tyr	Glu	Glu	Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys				
			165					170						175				
Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu			
			180					185						190				
Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu			
	195					200						205						
Glu	Asn	Leu	Ser	Met	His	Gln	Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu			
	210					215					220							
Asn	Asn	Met																
225																		

<210> 62
 <211> 284
 <212> PRT
 <213> Rattus norvegicus

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu			
1				5					10					15				
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala			
		20						25					30					
Glu	Asp	Arg	Ser	Lys	Gln	Leu	Glu	Glu	Asp	Ile	Ser	Ala	Lys	Glu	Lys			
	35						40					45						
Leu	Leu	Arg	Ala	Ser	Glu	Asp	Glu	Arg	Asp	Arg	Val	Leu	Glu	Glu	Leu			
	50					55					60							
His	Lys	Ala	Glu	Asp	Ser	Leu	Leu	Ala	Ala	Asp	Glu	Thr	Ala	Ala	Lys			
65					70					75					80			
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu			
				85					90					95				
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys			
			100					105					110					
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys			
	115						120						125					
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln			
	130					135						140						
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg			
145					150					155					160			
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu			
				165					170					175				
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu			
			180					185					190					
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu			
	195						200					205						
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu			
	210					215					220							
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu			
225					230				235						240			
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu			
				245					250					255				
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Ser	Met	His	Gln			
			260					265						270				
Met	Leu	His	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met							
	275						280											

<210> 63

<211> 281
 <212> PRT
 <213> Rattus norvegicus

<400> 63
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
 1 5 10 15
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala
 20 25 30
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys
 35 40 45
 Lys Leu Lys Ala Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu
 50 55 60
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp
 65 70 75 80
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
 85 90 95
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
 100 105 110
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
 115 120 125
 Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln
 130 135 140
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg
 145 150 155 160
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu
 165 170 175
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu
 180 185 190
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu
 195 200 205
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu
 210 215 220
 Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
 225 230 235 240
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu
 245 250 255
 Glu Asp Gln Leu Tyr His Gln Leu Glu Gln Asn Arg Arg Leu Thr Asn
 260 265 270
 Glu Leu Lys Leu Ala Leu Asn Glu Asp
 275 280

<210> 64
 <211> 251
 <212> PRT
 <213> Rattus norvegicus

<400> 64
 Met Ala Gly Ser Ser Ser Leu Glu Ala Val Arg Arg Lys Ile Arg Ser
 1 5 10 15
 Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Ser Leu Gln
 20 25 30
 Arg Glu Leu Asp Gln Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp
 35 40 45
 Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp
 50 55 60
 Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala
 65 70 75 80
 Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser
 85 90 95
 Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu
 100 105 110

Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg	Lys	Tyr	Glu	Glu
		115					120					125			
Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu	Glu	Arg	Ala	Glu
	130					135					140				
Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu	Leu	Glu	Glu	Glu
145					150				155						160
Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	Ala	Gln	Ala	Glu
				165					170					175	
Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu
			180					185					190		
Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg
		195					200					205			
Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Asp	Lys	Phe
	210					215					220				
Leu	Cys	Phe	Ser	Pro	Pro	Lys	Thr	Pro	Ser	Ser	Ser	Arg	Met	Ser	His
225					230					235					240
Leu	Ser	Glu	Leu	Cys	Ile	Cys	Leu	Leu	Ser	Ser					
				245					250						

<210> 65
 <211> 245
 <212> PRT
 <213> Rattus norvegicus

<400> 65															
Met	Ala	Gly	Ser	Ser	Ser	Leu	Glu	Ala	Val	Arg	Arg	Lys	Ile	Arg	Ser
1				5					10				15		
Leu	Gln	Glu	Gln	Ala	Asp	Ala	Ala	Glu	Glu	Arg	Ala	Gly	Ser	Leu	Gln
			20				25					30			
Arg	Glu	Leu	Asp	Gln	Glu	Arg	Lys	Leu	Arg	Glu	Thr	Ala	Glu	Ala	Asp
		35					40					45			
Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp
	50					55				60					
Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	Leu	Glu	Glu	Ala
65					70				75						80
Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Ser
				85					90					95	
Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln	Glu	Ile	Gln	Leu
			100					105					110		
Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg	Lys	Tyr	Glu	Glu
		115					120					125			
Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu	Glu	Arg	Ala	Glu
	130					135					140				
Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu	Leu	Glu	Glu	Glu
145					150				155						160
Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	Ala	Gln	Ala	Glu
				165					170					175	
Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu
			180					185					190		
Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg
		195					200					205			
Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Asp	Gln	Leu
	210					215					220				
Tyr	His	Gln	Leu	Glu	Gln	Asn	Arg	Arg	Leu	Thr	Asn	Glu	Leu	Lys	Leu
225					230					235					240
Ala	Leu	Asn	Glu	Asp											
				245											

<210> 66
 <211> 961
 <212> PRT
 <213> Bos taurus

<400> 66

Met	Asn	Phe	Leu	Arg	Gly	Val	Met	Gly	Gly	Gln	Ser	Ala	Gly	Pro	Gln
1				5					10					15	
His	Thr	Glu	Ala	Glu	Thr	Ile	Gln	Lys	Leu	Cys	Asp	Arg	Val	Ala	Ser
			20					25					30		
Ser	Thr	Leu	Leu	Asp	Asp	Arg	Arg	Asn	Ala	Val	Arg	Ala	Leu	Lys	Ser
		35					40					45			
Leu	Ser	Lys	Lys	Tyr	Arg	Leu	Glu	Val	Gly	Ile	Gln	Ala	Met	Glu	His
	50					55					60				
Leu	Ile	His	Val	Leu	Gln	Thr	Asp	Arg	Ser	Asp	Ser	Glu	Ile	Ile	Gly
65					70					75					80
Tyr	Ala	Leu	Asp	Thr	Leu	Tyr	Asn	Ile	Ile	Ser	Asn	Asp	Glu	Glu	Glu
				85					90					95	
Glu	Val	Glu	Glu	Asn	Ser	Thr	Arg	Gln	Ser	Glu	Asp	Leu	Gly	Ser	Gln
			100					105					110		
Phe	Thr	Glu	Ile	Phe	Ile	Lys	Gln	Gln	Glu	Asn	Val	Thr	Leu	Leu	Leu
		115					120					125			
Ser	Leu	Leu	Glu	Glu	Phe	Asp	Phe	His	Val	Arg	Trp	Pro	Gly	Val	Lys
		130				135					140				
Leu	Leu	Thr	Ser	Leu	Leu	Lys	Gln	Leu	Gly	Pro	Gln	Val	Gln	Gln	Ile
145					150					155					160
Ile	Leu	Val	Ser	Pro	Met	Gly	Val	Ser	Arg	Leu	Met	Asp	Leu	Leu	Ala
				165					170					175	
Asp	Ser	Arg	Glu	Val	Ile	Arg	Asn	Asp	Gly	Val	Leu	Leu	Leu	Gln	Ala
			180					185					190		
Leu	Thr	Arg	Ser	Asn	Gly	Ala	Ile	Gln	Lys	Ile	Val	Ala	Phe	Glu	Asn
		195				200						205			
Ala	Phe	Glu	Arg	Leu	Leu	Asp	Ile	Ile	Thr	Glu	Glu	Gly	Asn	Ser	Asp
		210				215					220				
Gly	Gly	Ile	Val	Val	Glu	Asp	Cys	Leu	Ile	Leu	Leu	Gln	Asn	Leu	Leu
225					230					235					240
Lys	Asn	Asn	Asn	Ser	Asn	Gln	Asn	Phe	Phe	Lys	Glu	Gly	Ser	Tyr	Ile
				245					250					255	
Gln	Arg	Met	Lys	Pro	Trp	Phe	Glu	Val	Gly	Asp	Glu	Asn	Ser	Gly	Trp
			260					265					270		
Ser	Ala	Gln	Lys	Val	Thr	Asn	Leu	His	Leu	Met	Leu	Gln	Leu	Val	Arg
		275					280					285			
Val	Leu	Val	Ser	Pro	Asn	Asn	Pro	Pro	Gly	Ala	Thr	Ser	Ser	Cys	Gln
		290				295						300			
Lys	Ala	Met	Phe	Gln	Cys	Gly	Leu	Leu	Gln	Gln	Leu	Cys	Thr	Ile	Leu
305					310					315					320
Met	Ala	Thr	Gly	Val	Pro	Ala	Asp	Ile	Leu	Thr	Glu	Thr	Ile	Asn	Thr
				325					330					335	
Val	Ser	Glu	Val	Ile	Arg	Gly	Cys	Gln	Val	Asn	Gln	Asp	Tyr	Phe	Ala
			340					345					350		
Ser	Val	Asn	Ala	Pro	Ser	Asn	Pro	Pro	Arg	Pro	Ala	Ile	Val	Val	Leu
		355					360					365			
Leu	Met	Ser	Met	Val	Asn	Glu	Arg	Gln	Pro	Phe	Val	Leu	Arg	Cys	Ala
		370				375					380				
Val	Leu	Tyr	Cys	Phe	Gln	Cys	Phe	Leu	Tyr	Lys	Asn	Gln	Lys	Gly	Gln
385					390					395					400
Gly	Glu	Ile	Val	Ser	Thr	Leu	Leu	Pro	Ser	Thr	Ile	Asp	Ala	Thr	Gly
				405					410					415	
Asn	Thr	Val	Ser	Ala	Gly	Gln	Leu	Leu	Cys	Gly	Gly	Leu	Phe	Ser	Thr
			420					425					430		
Asp	Ser	Leu	Ser	Asn	Trp	Cys	Ala	Ala	Val	Ala	Leu	Ala	His	Ala	Leu
		435					440					445			
Gln	Glu	Asn	Ala	Thr	Gln	Lys	Glu	Gln	Leu	Leu	Arg	Val	Gln	Leu	Ala
		450				455					460				
Thr	Ser	Ile	Gly	Asn	Pro	Pro	Val	Ser	Leu	Leu	Gln	Gln	Cys	Thr	Asn
465					470					475					480
Ile	Leu	Ser	Gln	Gly	Ser	Lys	Ile	Gln	Thr	Arg	Val	Gly	Leu	Leu	Met

				485					490					495			
Leu	Leu	Cys	Thr	Trp	Leu	Ser	Asn	Cys	Pro	Ile	Ala	Val	Thr	His	Phe		
			500					505					510				
Leu	His	Asn	Ser	Ala	Asn	Val	Pro	Phe	Leu	Thr	Gly	Gln	Ile	Ala	Glu		
		515					520					525					
Asn	Leu	Gly	Glu	Glu	Glu	Gln	Leu	Val	Gln	Gly	Leu	Cys	Ala	Leu	Leu		
	530					535					540						
Leu	Gly	Ile	Ser	Ile	Tyr	Phe	Asn	Asp	Asn	Ser	Leu	Glu	Thr	Tyr	Met		
545					550					555					560		
Lys	Glu	Lys	Leu	Lys	Gln	Leu	Ile	Glu	Lys	Arg	Ile	Gly	Lys	Glu	Asn		
				565					570					575			
Phe	Ile	Glu	Lys	Leu	Gly	Phe	Ile	Ser	Lys	His	Glu	Leu	Tyr	Ser	Arg		
			580					585					590				
Ala	Ser	Gln	Lys	Pro	Gln	Pro	Asn	Phe	Pro	Ser	Pro	Glu	Tyr	Met	Ile		
		595					600					605					
Phe	Asp	His	Glu	Phe	Thr	Lys	Leu	Val	Lys	Glu	Leu	Glu	Gly	Val	Ile		
	610					615					620						
Thr	Lys	Ala	Ile	Tyr	Lys	Ser	Ser	Glu	Glu	Asp	Lys	Lys	Glu	Glu	Glu		
625					630					635					640		
Val	Lys	Lys	Thr	Leu	Glu	Gln	His	Asp	Ser	Ile	Val	Thr	His	Tyr	Lys		
				645					650					655			
Asn	Met	Ile	Arg	Glu	Gln	Asp	Leu	Gln	Leu	Glu	Glu	Leu	Lys	Gln	Gln		
			660					665					670				
Ile	Ser	Thr	Leu	Lys	Cys	Gln	Asn	Glu	Gln	Leu	Gln	Thr	Ala	Val	Thr		
		675					680					685					
Gln	Gln	Val	Ser	Gln	Ile	Gln	Gln	His	Lys	Asp	Gln	Tyr	Asn	Leu	Leu		
	690					695					700						
Lys	Val	Gln	Leu	Gly	Lys	Asp	Ser	Gln	His	Gln	Gly	Pro	Tyr	Thr	Asp		
705					710					715					720		
Gly	Ala	Gln	Met	Asn	Gly	Val	Gln	Pro	Glu	Glu	Ile	Ser	Arg	Leu	Arg		
				725					730					735			
Glu	Glu	Ile	Glu	Glu	Leu	Lys	Ser	Asn	Arg	Glu	Leu	Leu	Gln	Ser	Gln		
			740					745					750				
Leu	Ala	Glu	Lys	Asp	Ser	Leu	Ile	Glu	Asn	Leu	Lys	Ser	Ser	Gln	Leu		
		755					760					765					
Ser	Pro	Gly	Thr	Asn	Glu	Gln	Ser	Ser	Ala	Thr	Ala	Gly	Asp	Ser	Glu		
		770				775					780						
Gln	Ile	Ala	Glu	Leu	Lys	Gln	Glu	Leu	Ala	Thr	Leu	Lys	Ser	Gln	Leu		
785					790					795					800		
Asn	Ser	Gln	Ser	Val	Glu	Ile	Thr	Lys	Leu	Gln	Thr	Glu	Lys	Gln	Glu		
				805					810					815			
Leu	Leu	Gln	Lys	Thr	Glu	Ala	Phe	Ala	Lys	Ser	Ala	Pro	Val	Pro	Gly		
			820					825					830				
Glu	Ser	Glu	Thr	Val	Ile	Ala	Thr	Lys	Thr	Thr	Asp	Val	Glu	Gly	Arg		
		835					840					845					
Leu	Ser	Ala	Leu	Leu	Gln	Glu	Thr	Lys	Glu	Leu	Lys	Asn	Glu	Ile	Lys		
		850				855					860						
Ala	Leu	Ser	Glu	Glu	Arg	Thr	Ala	Ile	Lys	Glu	Gln	Leu	Asp	Ser	Ser		
865					870					875					880		
Asn	Ser	Thr	Ile	Ala	Ile	Leu	Gln	Asn	Glu	Lys	Asn	Lys	Leu	Glu	Val		
				885					890					895			
Asp	Ile	Thr	Asp	Ser	Lys	Lys	Glu	Gln	Asp	Asp	Leu	Leu	Val	Leu	Leu		
			900					905					910				
Ala	Asp	Gln	Asp	Gln	Lys	Ile	Phe	Ser	Leu	Lys	Asn	Lys	Leu	Lys	Glu		
		915					920					925					
Leu	Gly	His	Pro	Val	Glu	Glu	Glu	Asp	Glu	Leu	Glu	Ser	Gly	Asp	Gln		
	930					935					940						
Asp	Asp	Glu	Asp	Asp	Glu	Asp	Glu	Asp	Asp	Gly	Lys	Glu	Gln	Gly	His		
945					950					955					960		
Ile																	

<210> 67
 <211> 959
 <212> PRT
 <213> Rattus norvegicus

<400> 67
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 His Thr Glu Ala Glu Thr Ile Gln Lys Leu Cys Asp Arg Val Ala Ser
 20 25 30
 Ser Thr Leu Leu Asp Asp Arg Arg Asn Ala Val Arg Ala Leu Lys Ser
 35 40 45
 Leu Ser Lys Lys Tyr Arg Leu Glu Val Gly Ile Gln Ala Met Glu His
 50 55 60
 Leu Ile His Val Leu Gln Thr Asp Arg Ser Asp Ser Glu Ile Ile Ala
 65 70 75 80
 Tyr Ala Leu Asp Thr Leu Tyr Asn Ile Ile Ser Asn Asp Glu Glu Glu
 85 90 95
 Glu Val Glu Glu Asn Ser Thr Arg Gln Ser Glu Asp Leu Gly Ser Gln
 100 105 110
 Phe Thr Glu Ile Phe Ile Lys Gln Pro Glu Asn Val Thr Leu Leu Leu
 115 120 125
 Ser Leu Leu Glu Glu Phe Asp Phe His Val Arg Trp Pro Gly Val Arg
 130 135 140
 Leu Leu Thr Ser Leu Leu Lys Gln Leu Gly Pro Pro Val Gln Gln Ile
 145 150 155 160
 Ile Leu Val Ser Pro Met Gly Val Ser Lys Leu Met Asp Leu Leu Ala
 165 170 175
 Asp Ser Arg Glu Ile Ile Arg Asn Asp Gly Val Leu Leu Leu Gln Ala
 180 185 190
 Leu Thr Arg Ser Asn Gly Ala Ile Gln Lys Ile Val Ala Phe Glu Asn
 195 200 205
 Ala Phe Glu Arg Leu Leu Asp Ile Ile Thr Glu Glu Gly Asn Ser Asp
 210 215 220
 Gly Gly Ile Val Val Glu Asp Cys Leu Ile Leu Leu Gln Asn Leu Leu
 225 230 235 240
 Lys Asn Asn Asn Ser Asn Gln Asn Phe Phe Lys Glu Gly Ser Tyr Ile
 245 250 255
 Gln Arg Met Lys Ala Trp Phe Glu Val Gly Asp Glu Asn Pro Gly Trp
 260 265 270
 Ser Ala Gln Lys Val Thr Asn Leu His Leu Met Leu Gln Leu Val Arg
 275 280 285
 Val Leu Val Ser Pro Thr Asn Pro Pro Gly Ala Thr Ser Ser Cys Gln
 290 295 300
 Lys Ala Met Phe Gln Cys Gly Leu Leu Gln Gln Leu Cys Thr Ile Leu
 305 310 315 320
 Met Ala Thr Gly Ile Pro Ala Asp Ile Leu Thr Glu Thr Ile Asn Thr
 325 330 335
 Val Ser Glu Val Ile Arg Gly Cys Gln Val Asn Gln Asp Tyr Phe Ala
 340 345 350
 Ser Val Asn Ala Pro Ser Asn Pro Pro Arg Pro Ala Ile Val Val Leu
 355 360 365
 Leu Met Ser Met Val Asn Glu Arg Gln Pro Phe Val Leu Arg Cys Ala
 370 375 380
 Val Leu Tyr Cys Phe Gln Cys Phe Leu Tyr Lys Asn Glu Lys Gly Gln
 385 390 395 400
 Gly Glu Ile Val Ala Thr Leu Leu Pro Ser Thr Ile Asp Ala Thr Gly
 405 410 415
 Asn Ser Val Ser Ala Gly Gln Leu Leu Cys Gly Gly Leu Phe Ser Thr
 420 425 430
 Asp Ser Leu Ser Asn Trp Cys Ala Ala Val Ala Leu Ala His Ala Leu
 435 440 445

Gln	Gly	Asn	Ala	Thr	Gln	Lys	Glu	Gln	Leu	Leu	Arg	Val	Gln	Leu	Ala
	450					455					460				
Thr	Ser	Ile	Gly	Asn	Pro	Pro	Val	Ser	Leu	Leu	Gln	Gln	Cys	Thr	Asn
465					470					475					480
Ile	Leu	Ser	Gln	Gly	Ser	Lys	Ile	Gln	Thr	Arg	Val	Gly	Leu	Leu	Met
				485					490					495	
Leu	Leu	Cys	Thr	Trp	Leu	Ser	Asn	Cys	Pro	Ile	Ala	Val	Thr	His	Phe
			500					505					510		
Leu	His	Asn	Ser	Ala	Asn	Val	Pro	Phe	Leu	Thr	Gly	Gln	Ile	Ala	Glu
		515					520					525			
Asn	Leu	Gly	Glu	Glu	Glu	Gln	Leu	Val	Gln	Gly	Leu	Cys	Ala	Leu	Leu
	530					535					540				
Leu	Gly	Ile	Ser	Ile	Tyr	Phe	Asn	Asp	Asn	Ser	Leu	Glu	Asn	Tyr	Thr
545					550					555					560
Lys	Glu	Lys	Leu	Lys	Gln	Leu	Ile	Glu	Lys	Arg	Ile	Gly	Lys	Glu	Asn
				565					570					575	
Tyr	Ile	Glu	Lys	Leu	Gly	Phe	Ile	Ser	Lys	His	Glu	Leu	Tyr	Ser	Arg
			580					585					590		
Ala	Ser	Gln	Lys	Pro	Gln	Pro	Asn	Phe	Pro	Ser	Pro	Glu	Tyr	Met	Ile
		595					600					605			
Phe	Asp	His	Glu	Phe	Thr	Lys	Leu	Val	Lys	Glu	Leu	Glu	Gly	Val	Ile
	610					615					620				
Thr	Lys	Ala	Ile	Tyr	Lys	Ser	Ser	Glu	Glu	Asp	Lys	Lys	Glu	Glu	Glu
625					630					635					640
Val	Lys	Lys	Thr	Leu	Glu	Gln	His	Asp	Asn	Ile	Val	Thr	His	Tyr	Lys
				645					650					655	
Asn	Met	Ile	Arg	Glu	Gln	Asp	Leu	Gln	Leu	Glu	Glu	Leu	Lys	Gln	Gln
		660						665					670		
Val	Ser	Thr	Leu	Lys	Cys	Gln	Asn	Glu	Gln	Leu	Gln	Thr	Ala	Val	Thr
		675					680					685			
Gln	Gln	Ala	Ser	Gln	Ile	Gln	Gln	His	Lys	Asp	Gln	Tyr	Asn	Leu	Leu
	690					695					700				
Lys	Val	Gln	Leu	Gly	Lys	Asp	Asn	His	His	Gln	Gly	Ser	His	Ser	Asp
705					710					715					720
Gly	Ala	Gln	Val	Asn	Gly	Ile	Gln	Pro	Glu	Glu	Ile	Ser	Arg	Leu	Arg
				725					730					735	
Glu	Glu	Ile	Glu	Glu	Leu	Arg	Ser	His	Gln	Val	Leu	Leu	Gln	Ser	Gln
			740					745					750		
Leu	Ala	Glu	Lys	Asp	Thr	Val	Ile	Glu	Asn	Leu	Arg	Ser	Ser	Gln	Val
		755					760					765			
Ser	Gly	Met	Ser	Glu	Gln	Ala	Leu	Ala	Thr	Cys	Ser	Pro	Arg	Asp	Ala
	770					775				780					
Glu	Gln	Val	Ala	Glu	Leu	Lys	Gln	Glu	Leu	Ser	Ala	Leu	Lys	Ser	Gln
785					790					795					800
Leu	Cys	Ser	Gln	Ser	Leu	Glu	Ile	Thr	Arg	Leu	Gln	Thr	Glu	Asn	Ser
				805					810					815	
Glu	Leu	Gln	Gln	Arg	Ala	Glu	Thr	Leu	Ala	Lys	Ser	Val	Pro	Val	Glu
				820				825					830		
Gly	Glu	Ser	Glu	Leu	Val	Thr	Ala	Ala	Lys	Thr	Thr	Asp	Val	Glu	Gly
		835					840					845			
Arg	Leu	Ser	Ala	Leu	Leu	Gln	Glu	Thr	Lys	Glu	Leu	Lys	Asn	Glu	Ile
	850					855					860				
Lys	Ala	Leu	Ser	Glu	Glu	Arg	Thr	Ala	Ile	Gln	Lys	Gln	Leu	Asp	Ser
865					870					875					880
Ser	Asn	Ser	Thr	Ile	Ala	Ile	Leu	Gln	Thr	Glu	Lys	Asp	Lys	Leu	Tyr
				885					890					895	
Leu	Glu	Val	Thr	Asp	Ser	Lys	Lys	Glu	Gln	Asp	Asp	Leu	Leu	Val	Leu
			900					905					910		
Leu	Ala	Asp	Gln	Asp	Gln	Lys	Ile	Leu	Ser	Leu	Lys	Ser	Lys	Leu	Lys
		915					920					925			
Asp	Leu	Gly	His	Pro	Val	Glu	Glu	Glu	Asp	Glu	Ser	Gly	Asp	Gln	Glu
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Asp Asp Asp Asp Glu Leu Asp Asp Gly Asp Arg Asp Gln Asp Ile
 945 950 955

<210> 68
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 <212> PRT
 <213> Caenorhabditis elegans

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 Ser Glu Asp Gly Val Asp Asn Gly Gly Pro Ile Asp Glu Pro Ser Asp
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 Arg Asp Asn Ile Glu Gln Leu Met Met Asn Met Leu Glu Asp Arg Asp
 35 40 45
 Lys Leu Gln Glu Gln Leu Glu Asn Tyr Lys Val Gln Leu Glu Asn Ala
 50 55 60
 Gly Leu Arg Thr Lys Glu Val Glu Lys Glu Arg Asp Met Met Lys Arg
 65 70 75 80
 Gln Phe Glu Val His Thr Gln Asn Leu Pro Gln Glu Leu Gln Thr Met
 85 90 95
 Thr Arg Glu Leu Cys Leu Leu Lys Glu Gln Leu Leu Glu Lys Asp Glu
 100 105 110
 Glu Ile Val Glu Leu Lys Ala Glu Arg Asn Asn Thr Arg Leu Leu Leu
 115 120 125
 Glu His Leu Glu Cys Leu Val Ser Arg His Glu Arg Ser Leu Arg Met
 130 135 140
 Thr Val Met Lys Arg Gln Ala Gln Asn His Ala Gly Val Ser Ser Glu
 145 150 155 160
 Val Glu Val Leu Lys Ala Leu Lys Ser Leu Phe Glu His His Lys Ala
 165 170 175
 Leu Asp Glu Lys Val Arg Glu Arg Leu Arg Val Ala Met Glu Arg Val
 180 185 190
 Ala Thr Leu Glu Glu Glu Leu Ser Thr Lys Gly Asp Glu Asn Ser Ser
 195 200 205
 Leu Lys Ala Arg Ile Ala Thr Tyr Ala Ala Glu Ala Glu Glu Ala Met
 210 215 220
 Ala Ser Asn Ala Pro Ile Asn Gly Ser Ile Ser Ser Glu Ser Ala Asn
 225 230 235 240
 Arg Leu Ile Glu Met Gln Glu Ala Leu Glu Arg Met Lys Thr Glu Leu
 245 250 255
 Ala Asn Ser Leu Lys Gln Ser Thr Glu Ile Thr Thr Arg Asn Ala Glu
 260 265 270
 Leu Glu Asp Gln Leu Thr Glu Asp Ala Arg Glu Lys His Ala Ala Gln
 275 280 285
 Glu Ser Ile Val Arg Leu Lys Asn Gln Ile Cys Glu Leu Asp Ala Gln
 290 295 300
 Arg Thr Asp Gln Glu Thr Arg Ile Thr Thr Phe Glu Ser Arg Phe Leu
 305 310 315 320
 Thr Ala Gln Arg Glu Ser Thr Cys Ile Arg Asp Leu Asn Asp Lys Leu
 325 330 335
 Glu His Gln Leu Ala Asn Lys Asp Ala Val Arg Leu Asn Glu Glu
 340 345 350
 Lys Val His Ser Leu Gln Glu Arg Leu Glu Leu Ala Glu Lys Gln Leu
 355 360 365
 Ala Gln Ser Leu Lys Lys Ala Glu Ser Leu Pro Ser Val Glu Ala Glu
 370 375 380
 Leu Gln Gln Arg Met Glu Ala Leu Thr Ala Ala Glu Gln Lys Ser Val
 385 390 395 400
 Ser Ala Glu Glu Arg Ile Gln Arg Leu Asp Arg Asn Ile Gln Glu Leu
 405 410 415
 Ser Ala Glu Leu Glu Arg Ala Val Gln Arg Glu Arg Met Asn Glu Glu

			420					425					430		
His	Ser	Gln	Arg	Leu	Ser	Ser	Thr	Val	Asp	Lys	Leu	Leu	Ser	Glu	Ser
		435					440					445			
Asn	Asp	Arg	Leu	Gln	Leu	His	Leu	Lys	Glu	Arg	Met	Gln	Ala	Leu	Asp
	450					455					460				
Asp	Lys	Asn	Arg	Leu	Thr	Gln	Gln	Leu	Asp	Gly	Thr	Lys	Lys	Ile	Tyr
465					470					475					480
Asp	Gln	Ala	Glu	Arg	Ile	Lys	Asp	Arg	Leu	Gln	Arg	Asp	Asn	Glu	Ser
				485					490					495	
Leu	Arg	Gln	Glu	Ile	Glu	Ala	Leu	Arg	Gln	Gln	Leu	Tyr	Asn	Ala	Arg
			500					505					510		
Thr	Ala	Gln	Phe	Gln	Ser	Arg	Met	His	Ala	Ile	Pro	Phe	Thr	His	Ala
		515					520					525			
Gln	Asn	Ile	Val	Gln	Gln	Gln	Pro	Gln	Ala	Ser	Ile	Ala	Gln	Gln	Ser
	530					535					540				
Ala	Tyr	Gln	Met	Tyr	Lys	Gln	Gln	Pro	Ala	Gln	Gln	Tyr	Gln	Thr	Val
545					550					555					560
Gly	Met	Arg	Arg	Pro	Asn	Lys	Gly	Arg	Ile	Ser	Ala	Leu	Gln	Asp	Asp
				565					570					575	
Pro	Asn	Lys	Val	Gln	Thr	Leu	Asn	Glu	Gln	Glu	Trp	Asp	Arg	Leu	Gln
			580					585					590		
Gln	Ala	His	Val	Leu	Ala	Asn	Val	Gln	Gln	Ala	Phe	Ser	Ser	Ser	Pro
		595					600					605			
Ser	Leu	Ala	Asp	Val	Gly	Gln	Ser	Thr	Leu	Pro	Arg	Pro	Asn	Thr	Ala
	610					615					620				
Val	Gln	His	Gln	Gln	Asp	Asp	Met	Met	Asn	Ser	Gly	Met	Gly	Met	Pro
625					630					635					640
Ser	Gly	Met	Gln	Gly	Gly	Met	Gln	Gly	Gly	Met	Gly	Gly	Gly	Gln	Asp
				645						650				655	
Ala	Gln	Met	Leu	Ala	Ser	Met	Leu	Gln	Asp	Arg	Leu	Asp	Ala	Ile	Asn
			660					665					670		
Thr	Glu	Ile	Arg	Leu	Ile	Gln	Gln	Glu	Lys	His	His	Ala	Glu	Arg	Val
		675					680					685			
Ala	Glu	Gln	Leu	Glu	Arg	Ser	Ser	Arg	Glu	Phe	Tyr	Asp	Asp	Gln	Gly
	690					695					700				
Ile	Ser	Thr	Arg	Ser	Ser	Pro	Arg	Ala	Ser	Pro	Gln	Leu	Asp	Asn	Met
705					710					715					720
Arg	Gln	His	Lys	Tyr	Asn	Thr	Leu	Pro	Ala	Asn	Val	Ser	Gly	Asp	Arg
				725						730				735	
Arg	Tyr	Asp	Ile	Tyr	Gly	Asn	Pro	Gln	Phe	Val	Asp	Asp	Arg	Met	Val
			740					745					750		
Arg	Asp	Leu	Asp	Tyr	Glu	Pro	Arg	Arg	Gly	Tyr	Asn	Gln	Phe	Asp	Glu
		755					760					765			
Met	Gln	Tyr	Glu	Arg	Asp	Arg	Met	Ser	Pro	Ala	Ser	Ser	Val	Ala	Ser
		770													

Leu	His	Arg	Leu	Ala	Met	Ala	Arg	Asp	Ser	Leu	Gln	Leu	Gln	Val	Ser
	210					215					220				
Val	Leu	Ser	Glu	Gln	Val	Gly	Ala	Gln	Lys	Glu	Lys	Ile	Lys	Asp	Leu
225					230					235					240
Glu	Thr	Val	Ile	Ala	Leu	Lys	Arg	Asn	Asn	Leu	Thr	Ser	Thr	Glu	Glu
				245				250						255	
Leu	Leu	Gln	Asp	Lys	Tyr	His	Arg	Ile	Asp	Glu	Cys	Gln	Glu	Leu	Glu
			260					265					270		
Ser	Lys	Lys	Met	Asp	Leu	Leu	Ala	Glu	Val	Ser	Ser	Leu	Lys	Leu	Arg
		275					280					285			
Tyr	Ala	Thr	Leu	Glu	Arg	Glu	Lys	Asn	Glu	Thr	Glu	Lys	Lys	Leu	Arg
	290					295					300				
Leu	Ser	Gln	Asn	Glu	Met	Asp	His	Val	Asn	Gln	Ser	Met	His	Gly	Met
305					310					315					320
Val	Val	Gln	Gln	Gln	Leu	Ala	His	His	Thr	Asn	Gly	His	Ser	Ser	Gly
				325					330						335
Gly	Tyr	Met	Ser	Pro	Leu	Arg	Glu	His	Arg	Ser	Glu	Lys	Asn	Asp	Asp
			340					345					350		
Glu	Met	Ser	Gln	Leu	Arg	Thr	Ala	Val	Gln	Arg	Leu	Met	Ala	Asp	Asn
		355					360					365			
Glu	His	Lys	Ser	Leu	Gln	Ile	Asn	Thr	Leu	Arg	Asn	Ala	Leu	Asp	Glu
	370					375					380				
Gln	Met	Arg	Ser	Arg	Ser	Gln	Gln	Glu	Asp	Phe	Tyr	Ala	Ser	Gln	Arg
385					390					395					400
Asn	Tyr	Thr	Asp	Asn	Phe	Asp	Val	Asn	Ala	Gln	Ile	Arg	Arg	Ile	Leu
				405					410					415	
Met	Asp	Glu	Pro	Ser	Asp	Ser	Met	Ser	His	Ser	Thr	Ser	Phe	Pro	Val
			420					425					430		
Ser	Leu	Ser	Ser	Thr	Thr	Ser	Asn	Gly	Lys	Gly	Pro	Arg	Ser	Thr	Val
		435					440					445			
Gln	Ser	Ser	Ser	Ser	Tyr	Asn	Ser	Ser	Leu	Ser	Ala	Val	Ser	Pro	Gln
	450					455					460				
His	Asn	Trp	Ser	Ser	Ala	Gly	Ala	Gly	Thr	Pro	Arg	Gln	Leu	His	Pro
465					470					475					480
Ile	Gly	Gly	Asn	Gln	Arg	Val	Asn	Asn	Ile	Thr	Ser	Ala	Gln	Tyr	Cys
				485					490					495	
Ser	Pro	Ser	Pro	Pro	Ala	Ala	Arg	Gln	Leu	Ala	Ala	Glu	Leu	Asp	Glu
			500					505					510		
Leu	Arg	Arg	Asn	Gly	Asn	Glu	Gly	Ala	Asn	His	Asn	Tyr	Ser	Ser	Ala
		515					520					525			
Ser	Leu	Pro	Arg	Gly	Val	Gly	Lys	Ala	Ser	Ser	Thr	Leu	Thr	Leu	Pro
	530					535					540				
Ser	Lys	Lys	Leu	Ser	Val	Ala	Ser	Gly	Thr	Ser	Val	Val	Glu	Ser	Asp
545					550					555					560
Asp	Glu	Ile	Ala	Arg	Gly	Arg	Asn	Leu	Asn	Ala	Thr	Ser	Gln	Ser	
				565					570					575	
Asn	Leu	Lys	Asn	Phe	Ser	Arg	Glu	Arg	Thr	Arg	Ser	Ser	Leu	Arg	Asn
			580					585					590		
Ile	Phe	Ser	Lys	Leu	Thr	Arg	Ser	Thr	Ser	Gln	Asp	Gln	Ser	Asn	Ser
	595						600					605			
Phe	Arg	Arg	Gly	Ser	Ala	Ala	Arg	Ser	Thr	Ser	Thr	Ala	Arg	Leu	Gly
	610					615						620			
Ser	Thr	Asn	His	Leu	Gly	Thr	Val	Ser	Lys	Arg	Pro	Pro	Leu	Ser	Gln
625					630					635					640
Phe	Val	Asp	Trp	Arg	Ser	Glu	Gln	Leu	Ala	Asp	Trp	Ile	Ala	Glu	Ile
				645					650					655	
Gly	Tyr	Pro	Gln	Tyr	Met	Asn	Glu	Val	Ser	Arg	His	Val	Arg	Ser	Gly
			660					665					670		
Arg	His	Phe	Leu	Asn	Met	Ser	Met	Asn	Glu	Tyr	Glu	Gly	Val	Leu	Asn
		675					680					685			
Ile	Lys	Asn	Pro	Val	His	Arg	Lys	Arg	Val	Ala	Ile	Leu	Leu	Arg	Arg
	690					695					700				

Ile	Glu	Glu	Asp	Ile	Met	Glu	Pro	Ala	Asn	Lys	Trp	Asp	Val	His	Gln
705					710					715					720
Thr	Leu	Arg	Trp	Leu	Asp	Asp	Ile	Gly	Leu	Pro	Gln	Tyr	Lys	Asp	Val
				725					730					735	
Phe	Ala	Glu	Asn	Val	Val	Asp	Gly	Pro	Leu	Leu	Leu	Ser	Leu	Thr	Ala
			740					745					750		
Asn	Asp	Ala	Val	Glu	Met	Lys	Val	Val	Asn	Ala	His	His	Tyr	Ala	Thr
		755					760					765			
Leu	Ala	Arg	Ser	Ile	Gln	Phe	Leu	Lys	Lys	Ala	Asp	Phe	Arg	Phe	Asn
	770					775					780				
Ala	Met	Glu	Lys	Leu	Ile	Asp	Gln	Asn	Ile	Val	Glu	Lys	Tyr	Pro	Cys
785					790					795					800
Pro	Asp	Val	Val	Val	Arg	Trp	Thr	His	Ser	Ala	Thr	Cys	Glu	Trp	Leu
				805					810					815	
Arg	Lys	Ile	Asp	Leu	Ala	Glu	Phe	Thr	Gln	Asn	Leu	Leu	Phe	Ala	Gly
			820					825					830		
Val	Pro	Gly	Ala	Leu	Met	Ile	Tyr	Glu	Pro	Ser	Phe	Thr	Ala	Glu	Ser
		835					840					845			
Leu	Ala	Glu	Ile	Leu	Gln	Met	Pro	Pro	His	Lys	Thr	Leu	Leu	Arg	Arg
	850					855					860				
His	Leu	Thr	Ser	His	Phe	Asn	Gln	Leu	Leu	Gly	Pro	Lys	Ile	Ile	Ala
865					870					875					880
Asp	Lys	Arg	Asp	Phe	Leu	Ala	Ala	Gly	Asn	Tyr	Pro	Gln	Ile	Ser	Pro
				885					890					895	
Thr	Gly	Arg	Val	Lys	Val	Val	Lys	Lys	Gly	Phe	Ser	Leu	Thr	Arg	Lys
			900					905					910		
Lys	Ala	Lys	Asn	Glu	Ile	Cys	Leu	Glu	Pro	Glu	Glu	Leu	Leu	Cys	Pro
		915					920					925			
Gln	Val	Leu	Val	His	Lys	Tyr	Pro	Thr	Gly	Ala	Gly	Asp	Asn	Ser	Ser
	930					935					940				
Phe	Glu	Ser	Ser	Asn	Val										
945					950										

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 <213> human rhinovirus 2

<400> 70
 Val Lys Ala Glu Thr Arg Leu Asn Pro Asp Leu Gln Pro Thr Glu
 1 5 10 15

<210> 71
 <211> 24
 <212> PRT
 <213> human immunodeficiency virus type 1

<220>
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 Thr Thr Lys Asn Ile Ile Gly Cys
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<400> 73
Ala Pro Lys Thr Asn Met Lys His Met Ala
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<210> 74
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<400> 74
Tyr Thr Thr Ser Thr Arg Gly Asp Leu Ala His Val Thr Thr Thr
1 5 10 15

<210> 75
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<213> Human poliovirus 1 Mahoney

<400> 75
Cys Val Thr Ile Met Thr Val Asp Asn Pro Ala Ser Thr Thr Asn Lys
1 5 10 15
Asp Lys

<210> 76
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<220>
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Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
1 5 10

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<223> Derived from human immunodeficiency virus 1 gp 120 protein.

<400> 78

His Ile Gly Pro Gly Arg Ala Phe Gly Gly Gly
1 5 10

<210> 79

<211> 10

<212> PRT

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<223> Derived from human immunodeficiency virus 1 protease protein.

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Met Ser Leu Pro Gly Arg Trp Lys Pro Lys
1 5 10

<210> 80

<211> 7

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<213> Neisseria meningitidis

<400> 80

Lys Asp Thr Asn Asn Asn Leu
1 5

<210> 81

<211> 18

<212> PRT

<213> Escherichia coli

<400> 81

Ala Val Pro Gln Gly Gln Gly Lys Val Thr Phe Ser Gly Thr Val Val
1 5 10 15
Asp Ala

<210> 82

<211> 53

<212> PRT

<213> Escherichia coli

<400> 82

Pro Cys Gly Ile Asp Ala Ala Gln Ser Ala Asp Gln Ser Val Asp Phe
1 5 10 15
Gly Gln Ile Ser Lys Val Phe Leu Asp Asn Asp Gly Gln Thr Thr Pro
20 25 30
Lys Ala Phe Asp Ile Lys Leu Val Asn Cys Asp Ile Thr Asn Tyr Lys
35 40 45
Lys Pro Ala Thr Gly
50

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<211> 33

<212> PRT

<213> Escherichia coli

<400> 83

Met Ile Lys Ser Thr Gly Ala Leu Leu Leu Phe Ala Ala Leu Ser Ala
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Gly Gln Ala Ile Ala Ser Asp Val Ala Phe Arg Gly Asn Leu Leu Asp
20 25 30
Arg

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 Pro Cys His Val Ser Gly Asp Ser Leu Asn Lys His Val Val Phe Lys
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 Thr Arg Ala Ser Arg Asp Phe Trp Tyr Pro Pro Gly Arg Ser Pro Thr
 20 25 30
 Glu Ser Phe Val Ile
 35

<210> 85
 <211> 55
 <212> PRT
 <213> Escherichia coli

<400> 85
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 1 5 10 15
 Val His Gly Val Phe Ala Gly Pro Phe Pro Pro Pro Gly Met Ser Leu
 20 25 30
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 35 40 45
 Phe His Gly Glu Val Val Arg
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 <212> PRT
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<210> 87
 <211> 36
 <212> PRT
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<400> 87
 Met Lys Lys Ile Arg Gly Leu Cys Leu Pro Val Met Leu Gly Ala Val
 1 5 10 15
 Leu Met Ser Gln His Val His Ala Ala Asp Asn Leu Thr Phe Lys Gly
 20 25 30
 Lys Leu Ile Ile
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 <211> 34
 <212> PRT
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 20 25 30
 Val Gly

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<400> 89
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 Val Leu Ala Asp Val Gln Ile Asn Ile Arg Gly Asn Val Tyr Ile
 20 25 30

<210> 90
 <211> 39
 <212> PRT
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<400> 90
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 20 25 30
 Thr Ile Ser Ile Ser Cys Thr
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<220>
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<210> 92
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<210> 94
 <211> 10

<212> DNA
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 <210> 98
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 <212> DNA
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 <210> 102
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 <212> DNA
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 <220>
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 <400> 102
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 <210> 103
 <211> 10
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 103
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 <210> 104
 <211> 10
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 <400> 110
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 <400> 112
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 <400> 119
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 <210> 120
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 <210> 122
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 <400> 125
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 <400> 126
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 <400> 127
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 <400> 128
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 <400> 129
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<210> 131
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ggttcaagtg 10

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 <400> 137
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<210> 141
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 <210> 143
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 <220>
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 <222> 8, 9, 10, 11
 <223> n = residue with no base, essentially glycines that allow the DNA to fold back on itself to form the triple helix

 <400> 143
 cccccccnnn nccccccc 18

 <210> 144
 <211> 7
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Theoretical sequence designed to show proper and improper joining elements

 <400> 144
 gggggggg 7

 <210> 145
 <211> 18
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<220>
<221> misc_feature
<222> 8, 9, 10, 11
<223> n = residue with no base, essentially glycines that allow the DNA to
fold back on itself to form the triple helix

<400> 145
ccctttttnnn nttttccc
18

<210> 146
<211> 7
<212> DNA
<213> Artificial Sequence

<220>
<223> Theoretical sequence designed to show proper and improper joining
elements

<400> 146
gggaaaa
7

<210> 147
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elements

<220>
<221> misc_feature
<222> 8, 9, 10, 11
<223> n = residue with no base, essentially glycines that allow the DNA to
fold back on itself to form the triple helix

<400> 147
tctctctnnn ntctctct
18

<210> 148
<211> 7
<212> DNA
<213> Artificial Sequence

<220>
<223> Theoretical sequence designed to show proper and improper joining
elements

<400> 148
agagaga
7

<210> 149
<211> 18
<212> DNA
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<220>
<223> Theoretical sequence designed to show proper and improper joining
elements

<220>
<221> misc_feature

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<222> 8, 9, 10, 11
 <223> n = residue with no base, essentially glycines that allow the DNA to fold back on itself to form the triple helix

<400> 149
 cttcctcnnn nctccttc 18

<210> 150
 <211> 7
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Theoretical sequence designed to show proper and improper joining elements

<400> 150
 gaaggag 7

<210> 151
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Theoretical sequence designed to show proper and improper joining elements

<400> 151
 ggactatggt 10

<210> 152
 <211> 10
 <212> DNA
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<220>
 <223> Theoretical sequence designed to show proper and improper joining elements

<400> 152
 gatacaagat 10

<210> 153
 <211> 10
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<220>
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<400> 153
 tctgtattgg 10

<210> 154
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<220>

<223> Theoretical sequence designed to show proper and improper joining elements

<400> 154
ataacctgac 10

<210> 155
<211> 10
<212> DNA
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<220>
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<400> 155
gggttttccc 10

<210> 156
<211> 10
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<400> 156
gatcttgatc 10

<210> 157
<211> 6
<212> PRT
<213> Escherichia coli

<400> 157
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<210> 158
<211> 14
<212> PRT
<213> Homo sapiens

<400> 158
Ser Gly Phe Asn Ala Asp Tyr Glu Ala Ser Ser Ser Arg Cys
1 5 10

<210> 159
<211> 17
<212> PRT
<213> Avian sarcoma virus 17

<400> 159
Pro Ile Asp Met Glu Ser Gln Glu Arg Ile Lys Ala Glu Arg Lys Arg
1 5 10 15
Met

<210> 160
<211> 10
<212> PRT

<213> Homo sapiens
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 Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
 1 5 10
 <210> 161
 <211> 15
 <212> PRT
 <213> Murine sarcoma virus
 <400> 161
 Glu Glu Tyr Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu
 1 5 10 15
 <210> 162
 <211> 11
 <212> PRT
 <213> Human herpes virus type 1
 <400> 162
 Gln Pro Glu Leu Ala Pro Glu Asp Pro Glu Asp
 1 5 10
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 <212> PRT
 <213> Enterobacteria phage T7
 <400> 163
 Met Ala Ser Met Thr Gly Gly Gln Gln Met Gly
 1 5 10
 <210> 164
 <211> 5
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Identified from non-biological peptide library.
 <400> 164
 Tyr Gly Gly Phe Leu
 1 5
 <210> 165
 <211> 15
 <212> PRT
 <213> Artificial
 <220>
 <223> Identified from M13 bacteriophage peptide display library.
 <400> 165
 Ile Ser Phe Glu Asn Thr Trp Leu Trp His Pro Gln Phe Ser Ser
 1 5 10 15
 <210> 166
 <211> 5
 <212> PRT
 <213> Artificial

<220>
 <223> Identified from non-biological peptide library.

 <400> 166
 Thr Pro His Pro Gln
 1 5

 <210> 167
 <211> 5
 <212> PRT
 <213> Artificial

 <220>
 <223> Identified from non-biological peptide library.

 <400> 167
 Met His Pro Met Ala
 1 5

 <210> 168
 <211> 15
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Derived from S-peptide fragment of ribonuclease A protein, probably
 from Bos taurus.

 <400> 168
 Lys Glu Thr Ala Ala Ala Lys Phe Glu Arg Gln His Met Asp Ser
 1 5 10 15

 <210> 169
 <211> 5
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Derived from a consensus recognition sequence of cAMP-dependent
 protein kinase (protein kinase A).

 <400> 169
 Arg Arg Ala Ser Val
 1 5

 <210> 170
 <211> 12
 <212> PRT
 <213> Artificial

 <220>
 <223> Identified from M13 bacteriophage peptide display library.

 <400> 170
 Val Thr Ser Pro Asp Ser Thr Thr Gly Ala Met Ala
 1 5 10

 <210> 171
 <211> 12
 <212> PRT
 <213> Artificial

<220>
 <223> Identified from M13 bacteriophage peptide display library.

 <400> 171
 Ala Ala Ser Pro Thr Gln Ser Met Ser Gln Ala Pro
 1 5 10

 <210> 172
 <211> 12
 <212> PRT
 <213> Artificial

 <220>
 <223> Identified from M13 bacteriophage peptide display library.

 <400> 172
 Ala Gln Asn Pro Ser Asp Asn Asn Thr His Thr His
 1 5 10

 <210> 173
 <211> 12
 <212> PRT
 <213> Artificial

 <220>
 <223> Identified from M13 bacteriophage peptide display library.

 <400> 173
 Ala Ser Ser Ser Arg Ser His Phe Gly Gln Thr Asp
 1 5 10

 <210> 174
 <211> 12
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Identified from M13 bacteriophage peptide display library.

 <400> 174
 Trp Ala His Ala Pro Gln Leu Ala Ser Ser Ser Thr
 1 5 10

 <210> 175
 <211> 12
 <212> PRT
 <213> Artificial

 <220>
 <223> Identified from M13 bacteriophage peptide display library.

 <400> 175
 Ala Arg Tyr Asp Leu Ser Ile Pro Ser Ser Glu Ser
 1 5 10

 <210> 176
 <211> 12
 <212> PRT
 <213> Artificial

 <220>
 <223> Identified from M13 bacteriophage peptide display library.

<400> 176
 Thr Pro Pro Arg Pro Ile Gln Tyr Asn His Thr Ser
 1 5 10

<210> 177
 <211> 12
 <212> PRT
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<400> 177
 Ser Ser Leu Gln Leu Pro Glu Asn Ser Phe Pro His
 1 5 10

<210> 178
 <211> 12
 <212> PRT
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<220>
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<400> 178
 Gly Thr Leu Ala Asn Gln Gln Ile Phe Leu Ser Ser
 1 5 10

<210> 179
 <211> 12
 <212> PRT
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<220>
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<400> 179
 His Gly Asn Pro Leu Pro Met Thr Pro Phe Pro Gly
 1 5 10

<210> 180
 <211> 12
 <212> PRT
 <213> Artificial

<220>
 <223> Identified from M13 bacteriophage peptide display library.

<400> 180
 Arg Leu Glu Leu Ala Ile Pro Leu Gln Gly Ser Gly
 1 5 10